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BSDA SERIES

Servo drive controller

User's Manual

BASECON

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1.1 Product Model

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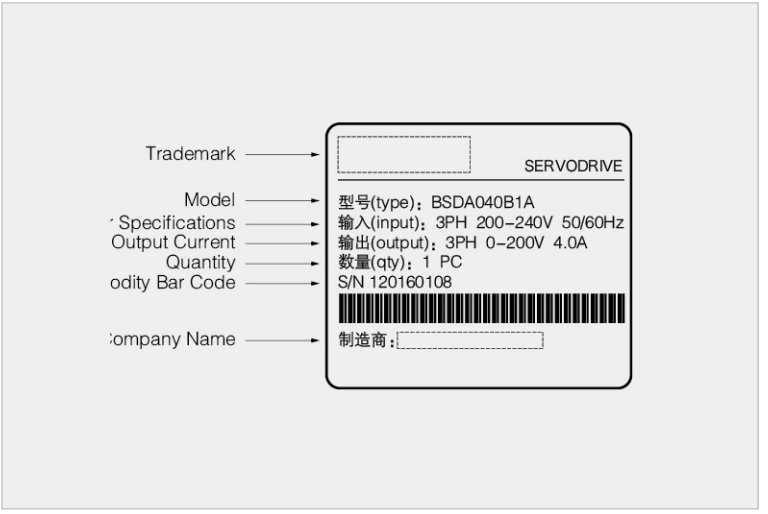
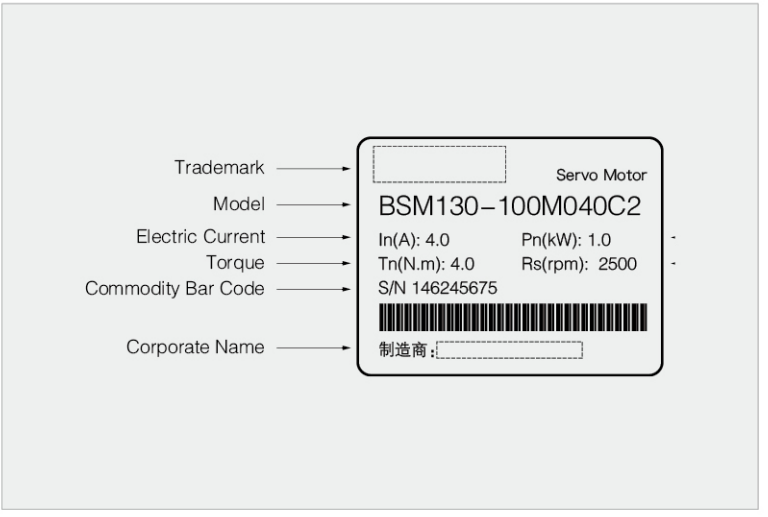


2、Description of Servo Motor Nameplate



1.2 Model Description of Servo Drive

B SD A 050 A 1 A XX

B	BASECON Company Code
SD	Servo Drive
A	Product Serial Number: A: General Type; B: One Driving Two Type; C: Economic Type; Z: Spindle Servo Type;
050	Current specification: ×0.1A = Unit
A	Power Specification: A: Three-Phase 220V; B: Single/Three-Phase 220V; C: Three-Phase 380V; D: Single Phase 110V;
1	Control Mode: 1 - General Type; 2 - Special for Analog Quantity; 3 - Position Pulse Control; 4 - General Support Extension Module;
A	A Encoder Interface: A: Incremental 2500rpp; B: Wire-Saving Type; C: Single Turn Absolute Value 17Bit Encoder; D: Rotary Encoder; E: Magnetic Incrementa l 2500rpp
XX	Special Configuration

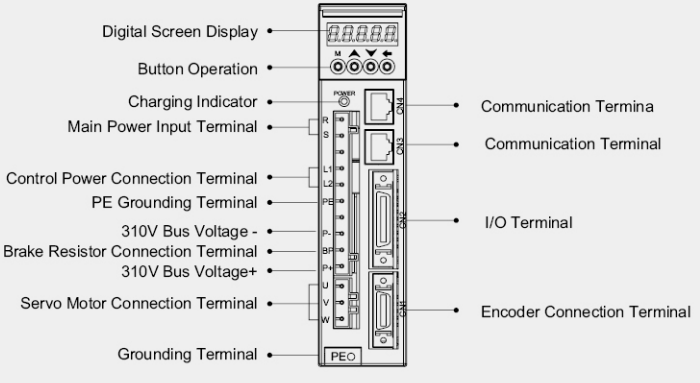
1.3 Model Description of Servo Motor

B SM 130 20 M 50 A 2 A 1 Z

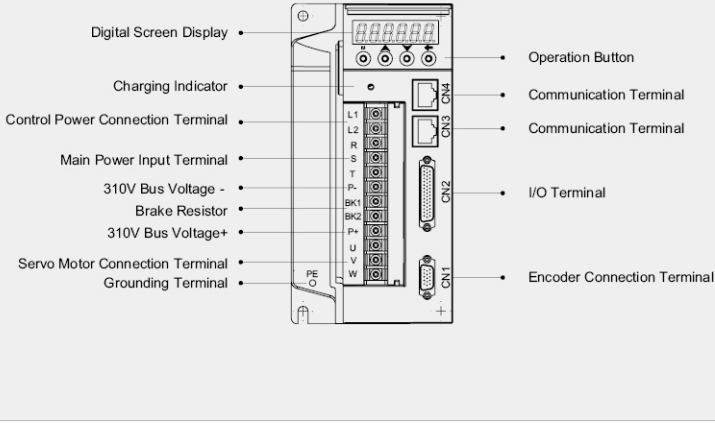
B	BASECON Company Code
SM	Servo Moto
130	Base No.: 60, 80, 90, 110, 130, 150
20	Power: 20:200W; 40:400W; 60:600W; 75:750W; 100:1KW; 150:1.5KW;
M	Inertia: S - Small; L-Low; M - Medium; H-High;
50	Torque Unit: 0.1N. m
A	Speed: A:1500rpm; B:2000rpm; C:2500rpm; D:3000rpm; E:1000rpm;
2	Power Supply Voltage: 2: 220V; 4:380V;
A	Encoder interface: A: Incremental 2500rpp; B: Wire-Saving Type; C: Single Turn Absolute Value 17Bi t Encoder; D: Rotary Encoder; E: Magnetic Incremental 2500rpp
1	Shaft Connection Mode: 1: Straight Shaft, No Key; 4: Straight Axis, 4 mm Key; 5: Straight Axis, 5 mm Key; 6: Straight Axis, 6 mm Key; 8: Straight Axis, 8 mm Key; 10: Straight Axis, 10 mm Key;
Z	with Z: with braking; No Z: no braking

1.4 Name of Each Part of Servo Drive

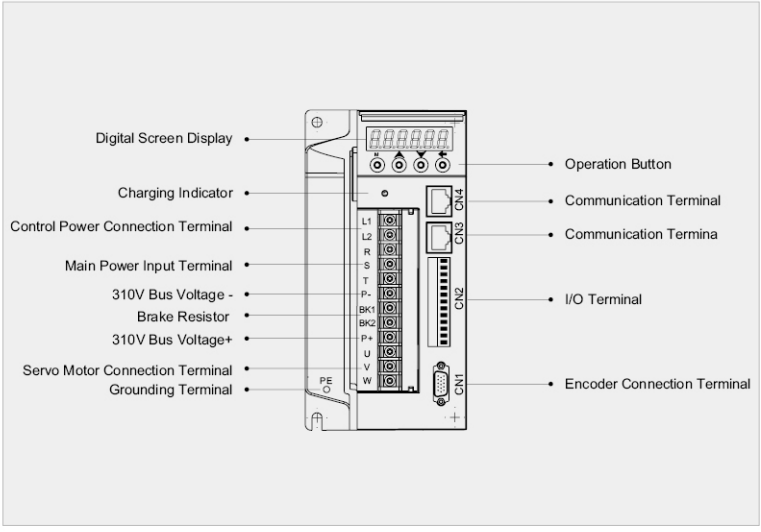
1、100W-600W Structure



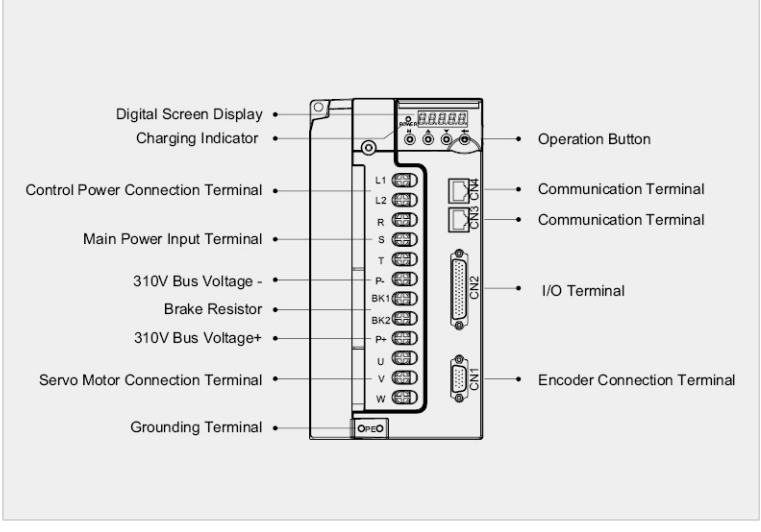
2、0.75-2.6kW Structure



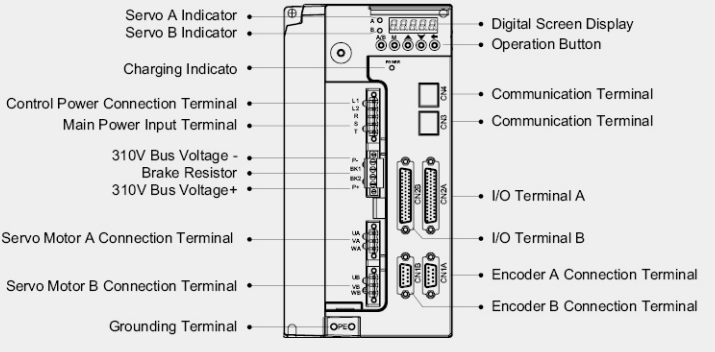
3. 0.75-2.6kW Single Servo-3 Structure (Position Pulse Type)



4. 3.0-5.5kW Structure



5. Dual Servo Structure



1.5 Matching Table of Motor and Drive (See Appendix I)

1.6 Outline and Installation Dimensions of Drive (See Appendix II)

1.7 Outline and Installation Dimensions of Motor (See Appendix III)

Chapter II Product Installation

2.1 Precautions

Users should pay special attention to the following items:

- ☐ Do not connect commercial power supply (220V) to U, V and W terminals on servo motor side, otherwise fire and fault may occur;
- ☐ The connection between the drive and the motor cannot be tightened;
- ☐ Do not touch the inside of the servo drive with your hand, otherwise you may get an electric shock;
- ☐ Please cut off the power supply for 5 minutes and check the wiring after the power indicator on the drive goes out, otherwise it may cause electric shock;
- ☐ When fixing the drive, each fixed position must be locked;
- ☐ If the temperature of servo drive, servo motor and peripheral equipment is too high be sure to keep a distance, otherwise it is easy to burn;
- ☐ The concentricity of motor shaft and equipment shaft is consistent, and the error is less than 0.03mm;
- ☐ If the connecting line between the drive and the motor exceeds 20m, please thicken the U, V and W connecting lines, and the encoder connecting line must be thickened;
- ☐ The ground wire is used to prevent electric shock in case. For safety, be sure to install the ground wire firmly. When the drive is running, the leakage current may exceed 3.5ma. Be sure to be reliably grounded and ensure that the grounding resistance is less than 10 Ω;
- ☐ The four screws for fixing the motor must be locked;
- ☐ Please do not knock the shaft of the servo motor, otherwise the encoder may be damaged;
- ☐ Please connect the ground wire (PE) at the U, V and W terminals of the servo motor. Do not mistake the sequence of U, V and W terminals during wiring, otherwise a fire accident may occur.

2.2 Storage Environment

The product must be placed in its packing box before installation. If the machine is not used temporarily, in order to make the product meet the quality assurance requirements of the company and future maintenance, the following matters must be paid attention to during storage:

- ☐ It must be placed in a dust-free and dry position;
- ☐ The ambient temperature of the storage location must be within the range of - 30 °C to + 60 °C ;
- ☐ The relative humidity of the storage location must be within the range of 0% to 90% without condensation;
- ☐ Avoid storing in the environment containing corrosive gas and liquid;

It is best to store it properly on a shelf or table.

2.3 Installation Environment

The ambient temperature of the drive of this product is - 10 ℃ ~ 50 ℃ . For long-term operation, the ambient temperature below 40 ℃ is recommended to ensure the reliable performance of the product. If the ambient temperature is higher than 40 ℃ , please reduce the amount by 3% at 1 ℃ .

If the product is installed in the distribution box, the size and ventilation conditions of the distribution box must ensure that all internal electronic devices do not have the risk of overheating. Also pay attention to whether the vibration of the machine will affect the electronic devices of the distribution box. In addition, the conditions for application also include:

☐ Places without high heating devices;
☐ Places without water droplets, steam, dust and oily dust;
☐ Places without corrosive and flammable gas and liquid;
☐ Places without floating dust and metal particles;
☐ Place where are solid and vibration free;
☐ Places without electromagnetic noise interference.

The ambient temperature of the motor is -10℃ ~ 50℃ . The conditions for application also include:

☐ Places without high heating devices;
☐ Places without water droplets, steam, dust and oily dust;
☐ Places without corrosive and flammable gas and liquid;
☐ Places without floating dust and metal particles.

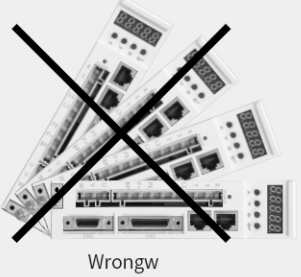
2.4 Installation Direction and Space

Attentions

The installation direction must be in accordance with the regulations, otherwise it will cause failure. In order to achieve good cooling cycle effect, when installing AC servo drive, enough space must be kept for its upper, lower, left, right and adjacent objects and baffle (wall), otherwise it will cause failure.

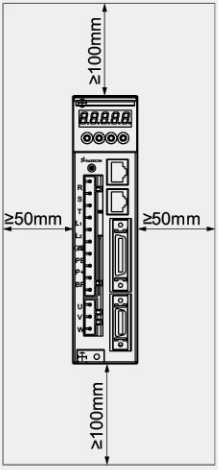
When installing the AC servo drive, its suction and exhaust holes shall not be sealed or toppled over, otherwise it will cause failure.

Correct

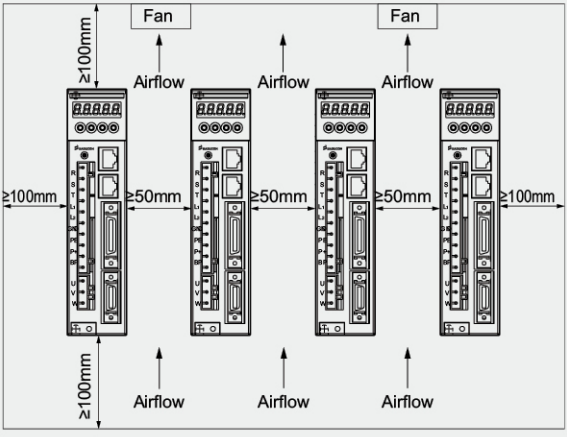


Wrongw

In order to enable the cooling fan to have relatively low wind resistance and effectively discharge heat, the user is required to abide by the recommended installation interval between one and multiple AC servo drives (as shown in the figure below).

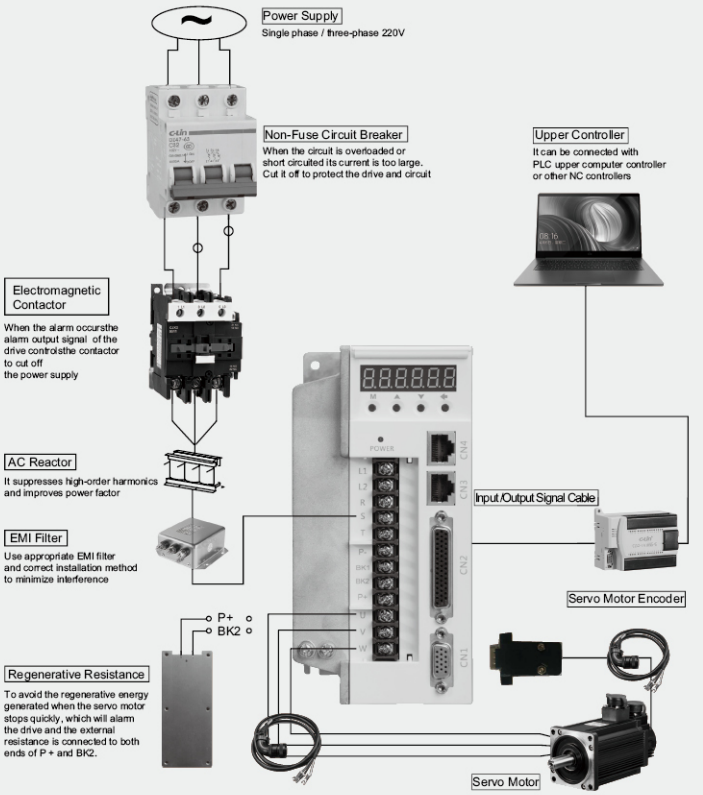


One Unit



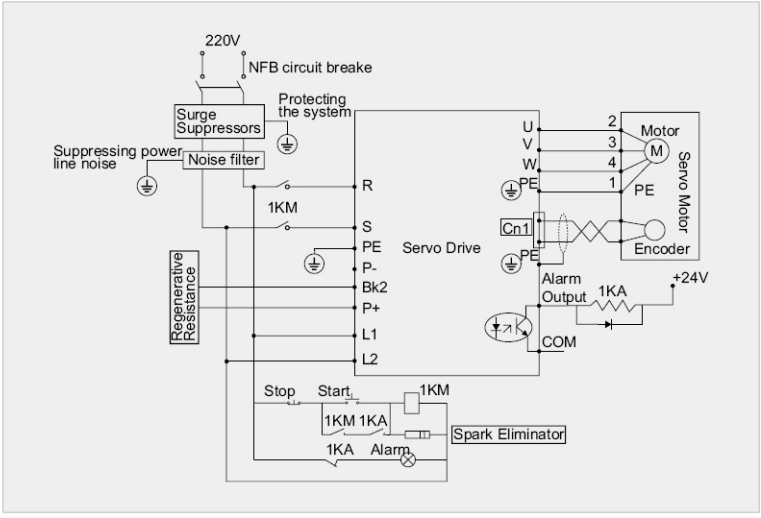
Multiple Units

3.1 Composition of Servo Drive System

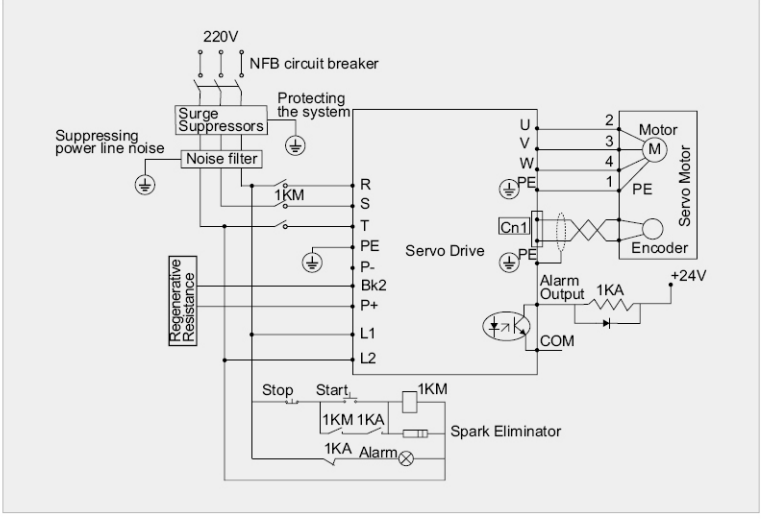


3.2 Main Circuit Wiring Diagram

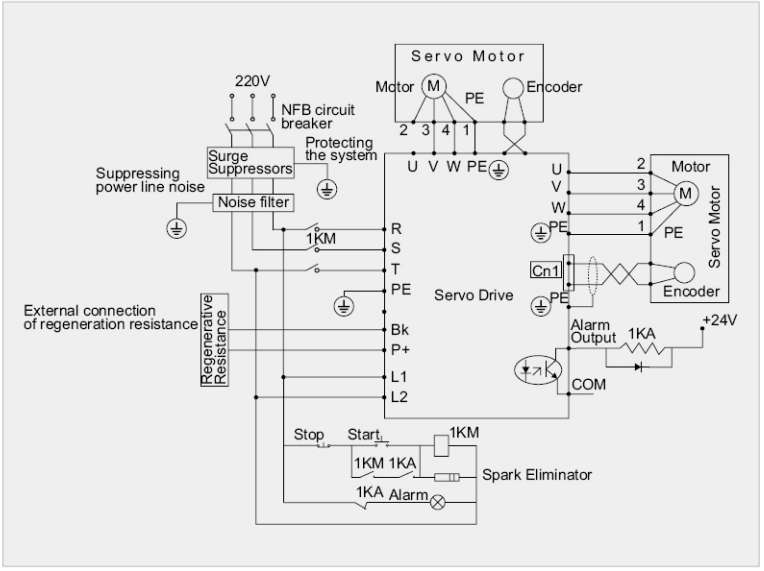
1. Main Circuit of 600W and below



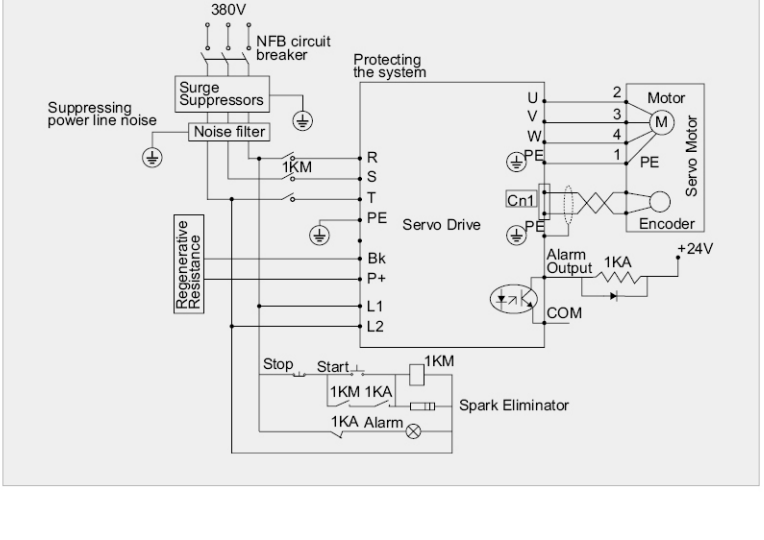
2. Main Circuit of 750W and above



3. Main Circuit of Dual Servo



4. 380V Main Circuit



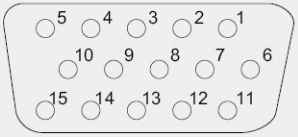
3.3 Name and Function of Terminals

1、Comparison Table of Main Circuit Terminal Function

Terminal Symbol	Terminal Name	Description
L1 , L2	Control power terminal	Single phase AC 200V ~ 240V, 50 / 60Hz
R, S, T	Main circuit power input terminal	Three-phase AC 200V ~ 240V, 50 / 60Hz
BK1, BK2	Regenerative resistor terminal	BK1 and BK2 are short circuited. Use internal resistance. Open circuit. Please connect external resistor.
		The external regenerative resistor is connected at both ends of P +, BK2
P-	Main circuit negative terminal	Multiple servos are connected when they share DC bus, but they are not connected at ordinary times
P+	Main circuit positive terminal	
U, V, W	Motor connection terminal	Connect to motor power interface
PE	Protective grounding terminal	Connect the power ground wire and motor ground wire on the housing of the drive
CN1	Encoder interface	Connect motor encoder interface
CN1A/CN1B	Dual servo encoder interface	
CN2	Input / output signal interface	Connect to external controller or upper computer controller
CN2A/CN2B	Dual servo input / output signal interface	
CN3, CN4	Communication interface	Connect 485 communication bus, can communication bus and program update port

2.Encoder (Drive Side) Pin Definition

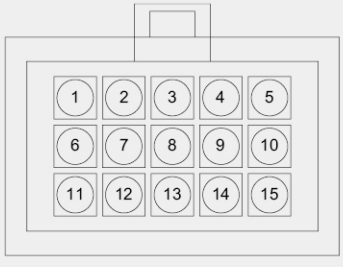
SCSI20 Drive Male Plug (Welding Side)



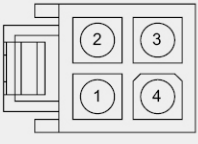
HDB15 Drive Male Plug (Welding Side)

CN1		SCSI20	HDB15	Encoder Port Definition
Signal Category	Signal Name	Pin No.	Pin No.	Function Description
Signal	QEPA+	2	1	Encoder phase-A signal
	QEPA-	1	6	
	QEPB+	4	2	Encoder phase-B signal
	QEPB-	3	7	
	QEPZ+	6	3	Encoder phase-C signal
	QEPZ-	5	8	
	QEPU+	8	4	Encoder phase-U signal
	QEPU-	7	9	
	QEPV+	10	5	Encoder phase-V signal
	QEPV-	9	10	
	QEPW+	20	14	Encoder phase-W signal
	QEPW-	19	15	
	VCC	14,15,16	12	5V power supply
Power Supply	GND	11,12,13	11	5V power supply
Null	NULL	17,18	13	No signal connection
Metal Shell	PE	-	-	Connected to encoder cable shield

3.Encoder and Power Line (Motor Side) Pin Definition



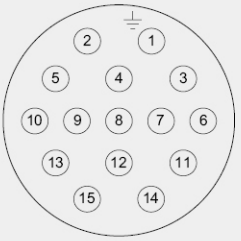
15P Motor Encoder Plastic Plug (Welding Side)



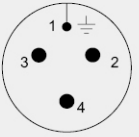
4P Motor Power Plastic Plug

Encoder Plug on Motor Side (Butt Plug), 40,60,80,90 Motor	
Signal Name	Plug No.
PE	1
5V	2
0V	3
A+	9
B+	4
Z+	7
U+	6
V+	10
W+	11
A-	13
B-	14
Z-	5
U-	8
V-	12
W-	15

Power Plug on Motor Side (Butt Plug), 40,60,80,90 Motor (Motor Flange for Motor Encoder Plug)	
Signal Name	Plug No.
PE	4
U	1
V	2
W	3



15P Motor Encoder Aviation Plug (Welding Side)



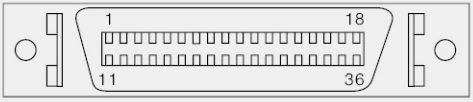
4P Motor Power Aviation Plug (Welding Side)

Encoder Plug on Motor Side (Aviation Plug), 110,130,150,180 Motor	
Signal Name	Plug No.
PE	1
5V	2
0V	3
A+	4
B+	5
Z+	6
U+	10
V+	11
W+	12
A-	7
B-	8
Z-	9
U-	13
V-	14
W-	15

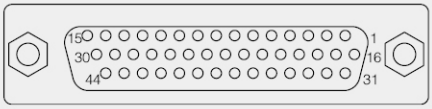
Power Plug on Motor Side (Aviation Plug), 110,130,150,180 Motor (Motor Flange for Motor Encoder Plug)	
Signal Name	Plug No.
PE	1
U	2
V	3
W	4

4.Input/Output Terminal

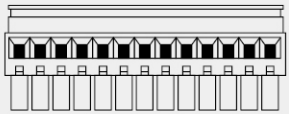
SCSI36 Interface



DB44 Interface



YC070-381-13P-3 Interface



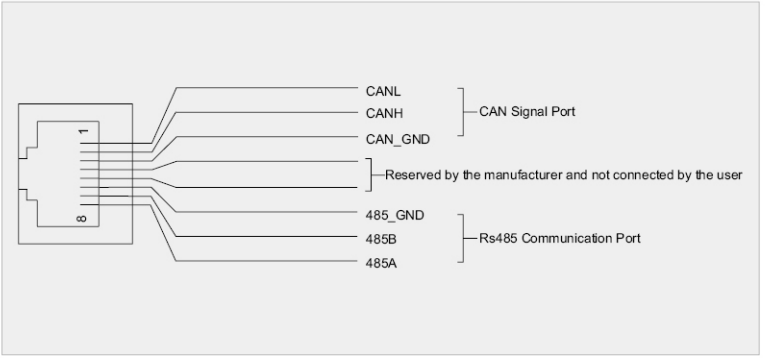
Arrangement of Connectors

CN2		SCSI36	DB44	YC070-381-13P	Input / output signal interface
Signal Category	Signal Name	Pin No.	Pin No.	Pin No.	Function Description
Output Signal	OUT1-	-	20	-	Hardware output port 1, corresponding parameter P2-23
	OUT1+	1	34	OUT1	
	OUT2-	-	21	-	Hardware output port 2, corresponding parameter P2-24
	OUT2+	2	35	OUT2	
	OUT3-	-	1	-	Hardware output port 3, corresponding parameter P2-25
	OUT3+	21	2	-	
	OUT4-	-	3	-	Hardware output port 4, corresponding parameter P2-26
	OUT4+	19	4	-	
	OUT5-	-	5	-	Hardware output port 5, corresponding parameter P2-27
	OUT5+	20	6	-	

Arrangement of Connectors					
Output Signal Common Terminal	COM-	10	-	-	Input signal common terminal negative pole, connected to external power supply GND
Input Signal Common Terminal	COM+	11	40	COM+	Input signal common terminal positive pole, connected to 24V power supply
CN2		SCSI36	DB44	YC070-381-13P	Input / output signal interface
Signal Category	Signal Name	Pin No.	Pin No.	Pin No.	Function Description
Input Signal	IN1	3	16	IN1	Hardware input port 1, corresponding parameter P2-16
	IN2	4	31	IN2	Hardware input port 2, corresponding parameter P2-17
	IN3	5	17	IN3	Hardware input port 3, corresponding parameter P2-18
	IN4	6	32	-	Hardware input port 4, corresponding parameter P2-19
	IN5	7	18	-	Hardware input port 5, corresponding parameter P2-20
	IN6	8	33	-	Hardware input port 6, corresponding parameter P2-21
	IN7	9	19	-	Hardware input port 7, corresponding parameter P2-22
Pulse Input Signal	PULSE_P	13	7	P+24V	External pulse input, when differential input, connect pulse + and pulse -; When the collector is open input, connect PULSE_P and PULSE -, at this time, there is 2K resistance inside. The wiring of DIR is similar.
	PULSE+	12	22	P+5V	
	PULSE-	14	36	P-	
	DIR_P	17	8	D+24V	
	DIR+	16	23	D+5V	
	DIR-	15	37	D-	

Arrangement of Connectors					
CN2		SCSI36	DB44	YC070-381-13P	Input / output signal interface
Signal Category	Signal Name	Pin No.	Pin No.	Pin No.	Function Description
Analog Input Signal	Vref1_SPD	32	38	-	The analog quantity is given ± 10V, corresponding to the speed command.
	Vref_GND	31	24	-	
	Vref2_TOR	30	39	-	The analog quantity is given ± 10V, corresponding to the torque command.
	Vref_GND	29	9	-	
Encoder Signal Output	QEPOA+	26	29	-	The encoder signal is output in differential mode, and the frequency division ratio can be set through P1-04.
	QEPOA-	27	30	-	
	QEPOB+	24	27	-	
	QEPOB-	25	28	-	
	QEPOZ+	22	25	-	
	QEPOZ-	23	26	-	
Non Isolated Power Supply	+15V	36	43	-	It can be used for analog signals with a driving capacity of 50mA. 15V GND is connected with GND of internal control circuit.
	-15V	35	14	-	
	15VGND	18	44	-	
Isolated Power Supply	24V	34	41	-	It can be used for external IO signals, and the driving capacity is 100mA. Isolated from internal control circuits.
	24VGND	28	42	COM-	
Terminal Shell	PE	-	-	-	Connected to shielding layer of control cable

5.Communication Terminal

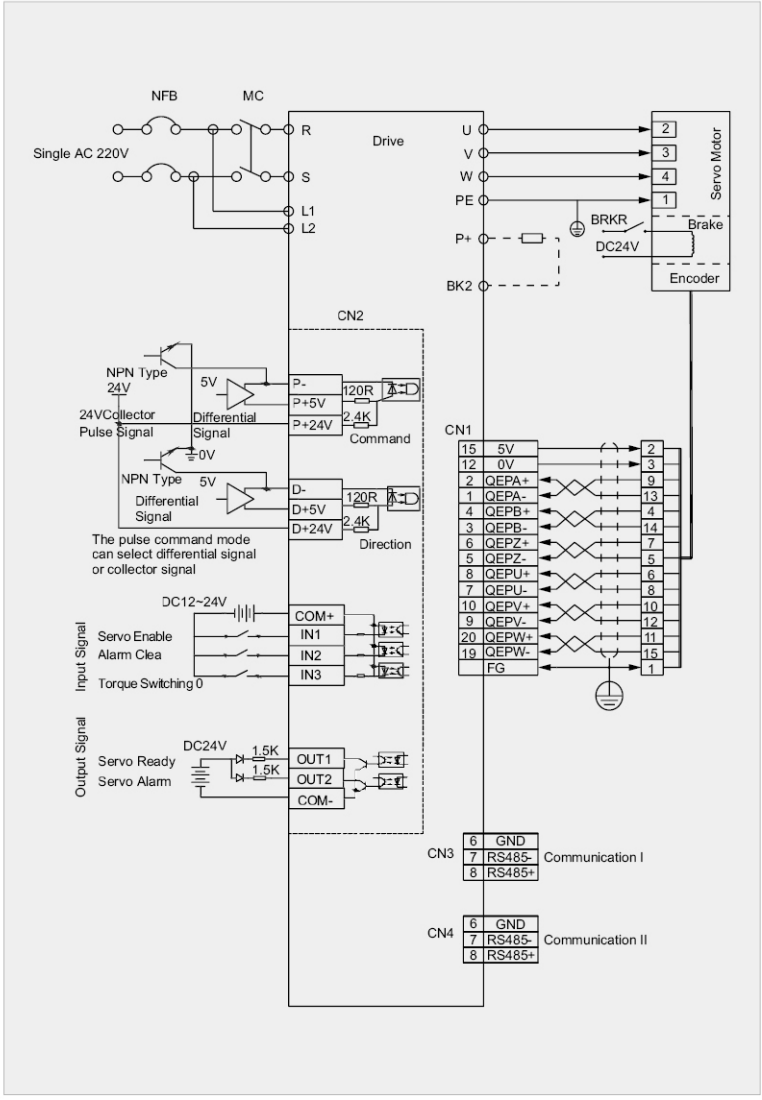


CN3 / CN4		
Pin No.	Signal Name	Function Description
1	CANL	CAN Signal Termina
2	CANH	
3	GND	CAN Signal Reference Ground
4	NC	System Reserved
5	NC	
6	GND	485 Signal Reference Ground
7	485B	485 Signal Terminal
8	485A	485 Signal Terminal

Note: connect 485 communication interface (pin 6 is GND, pin 7 is B, and pin 8 is A). If other pins of the network cable have wiring, please cut off the excess line and leave only 485 communication line.

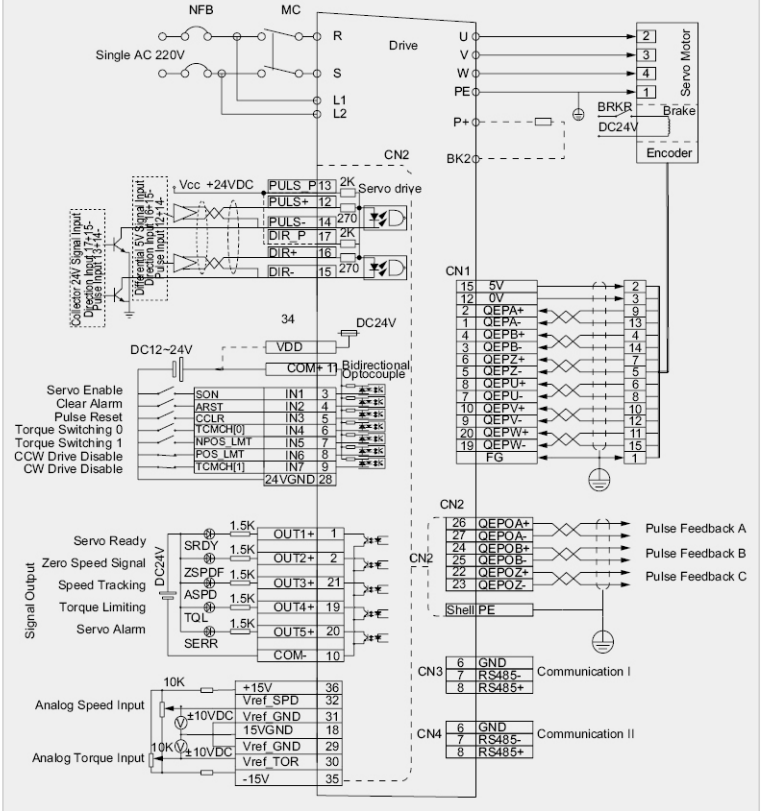
3.4 Wiring of Input and Output Signals

1. 750w-2.6kw-3 Wiring Diagram (Position Pulse Type)

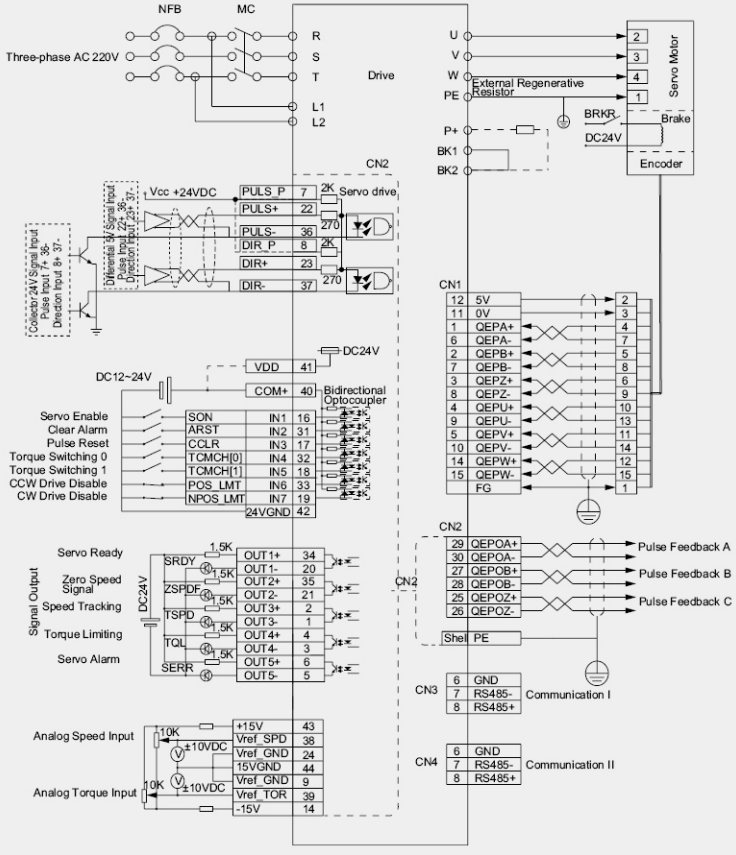


2. Connection Diagram of Position Control

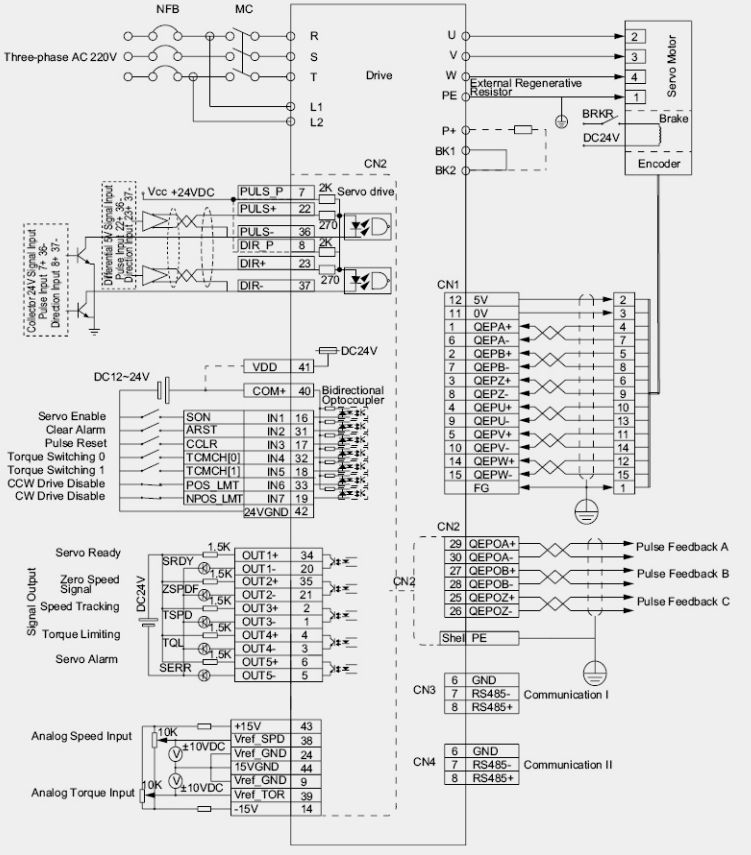
100W-600W Position Mode



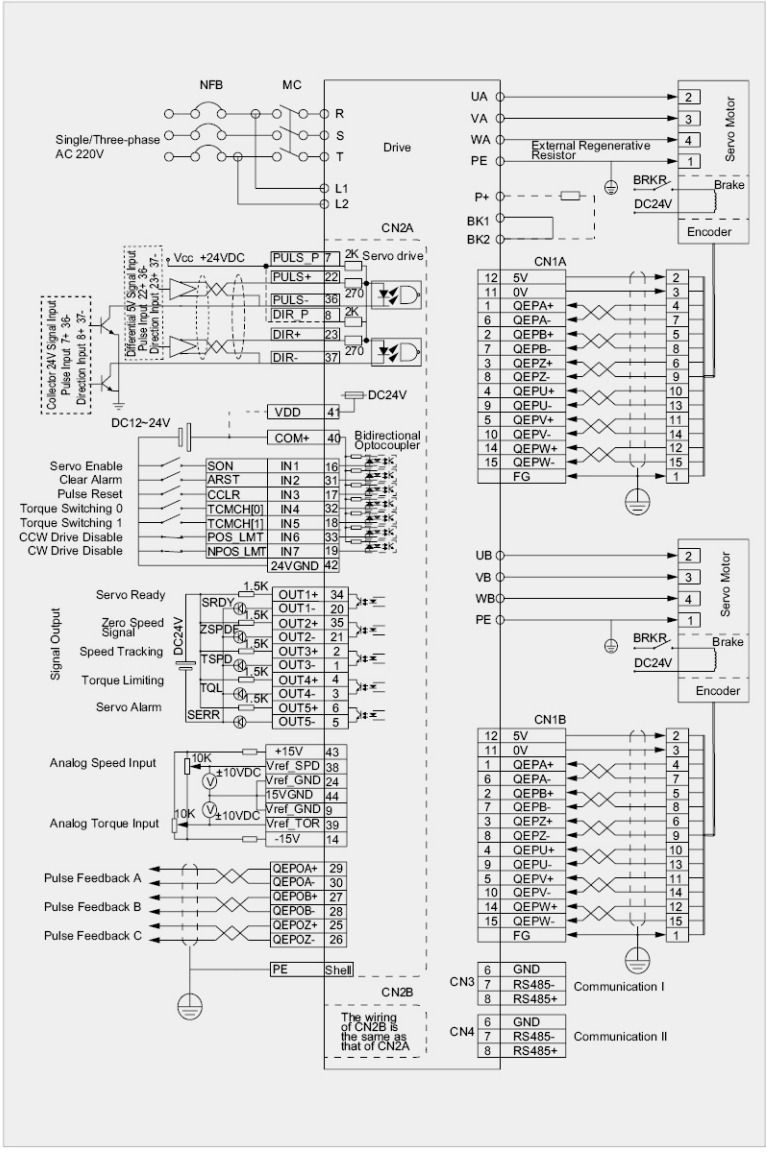
750W and Above Position Mode



380V Wiring Diagram

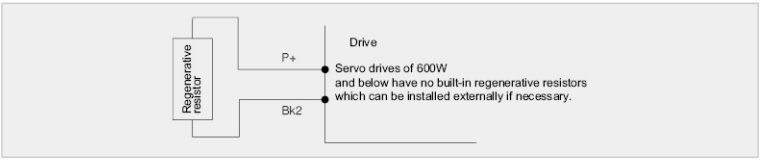


3. Double Servo Wiring Diagram

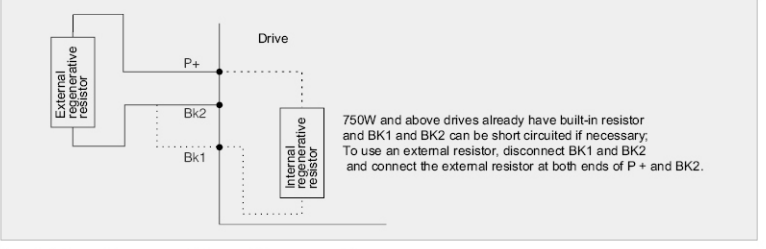


3.5 Connection Mode of Braking Resistor

1、Connection mode of external braking resistor of 600W and below



2、Connection mode of braking resistor of 750W and above.



3、Setting of regenerative resistor capacity

Regenerative resistor refers to a resistor that consumes regenerative energy generated when the servo motor is decelerated, etc.
When connecting the external regenerative resistor, it is necessary to set the resistance value of P1-64, the power of P1-65 and the utilization rate of P1-66.

Drive power	Internal braking resistor	Resistance value Ω	Resistance power W	Resistance utilization %	Minimum allowable resistance Ω
		P1-64	P1-65	P1-66	
600W below	NO	-	-	-	75
750W	YES	60	60	100	40
1kW	YES	60	60	100	40
1.8kW	YES	60	60	100	40
3kW	YES	40	100	100	15
4kW	YES	40	100	100	10

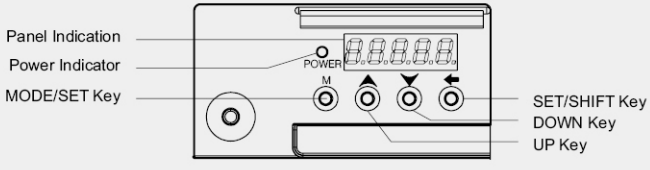
The utilization rate of regenerative resistor varies according to the cooling state of external regenerative resistor.

☐ Self cooling mode (natural convection cooling): set the value below 50%.

☐ Forced air cooling mode: set the value below 100%.

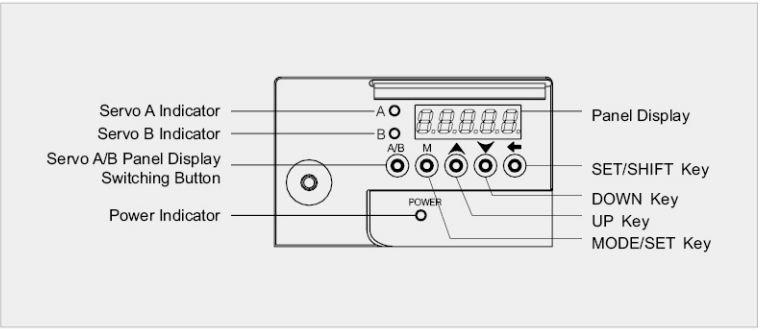
☐ When the user wants to connect the external regenerative resistor, please make sure that the resistance value used is the same as the built-in regenerative resistance value; If the user wants to increase the power of the regenerative resistor in parallel please determine whether its resistance value meets the limiting conditions.

4.1 Name of Each Part of Single Servo Panel



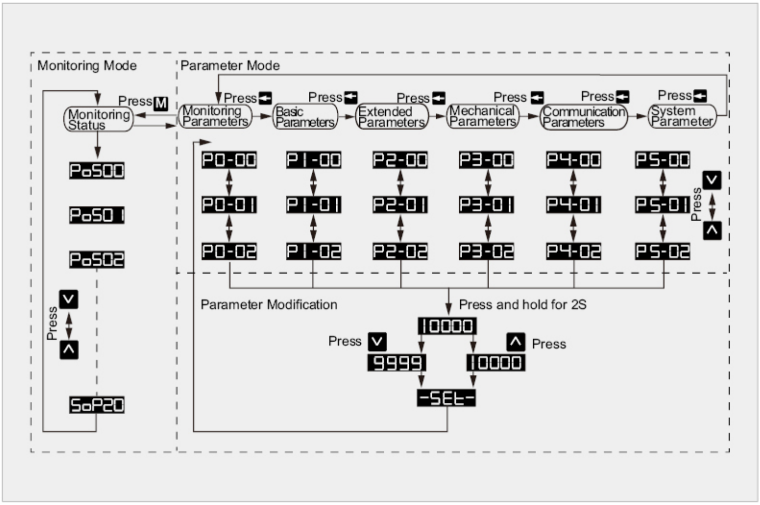
Name	Function
M MODE / ESC Key	Monitoring mode and parameter mode switching. Exit parameter setting and return to the previous menu.
▲ UP Key	Change the monitoring parameters, the value of XX in parameter Py-xx, and the set value.
▼ DOWN Key	Change the monitoring parameters, the value of XX in parameter Py-xx, and the set value.
◀ SET / SHIFT Key	Short press is the shift function. Long press is the set function. Parameter mode: when Py-xx is displayed, short press to change the value of Y in Py-xx. Long press to enter the lower menu and display the parameter value. When displaying the value of Py-xx parameter, short press to shift. Long press yes to save the parameter value.

4.2 Name of Each Part of Dual Servo Panel



Name	Function
A/B CHANGE Key	Switch between drive A and drive B.
M MODE / ESC Key	Monitoring mode and parameter mode switching. Exit parameter setting and return to the previous menu.
▲ UP Key	Change the monitoring parameters, the value of XX in parameter Py-xx, and the set value.
▼ DOWN Key	Change the monitoring parameters, the value of XX in parameter Py-xx, and the set value.
← SET / SHIFT Key	Short press is the shift function. Long press is the set function. Parameter mode: when Py-xx is displayed, short press to change the value of Y in Py-xx. Long press to enter the lower menu and display the parameter value. When displaying the value of Py-xx parameter, short press to shift. Long press yes to save the parameter value.

4.3 Parameter Setting Process



- ☐ When the drive is powered on, bscon is displayed first, and then the monitoring display symbol [spd08] is continuously displayed for about one second. The content value is then displayed.
- ☐ In the monitoring mode, press the [▲ up / ▼ down] key to switch the monitoring content. At this time, the monitoring display symbol will be displayed for about 2 seconds
- ☐ In the monitoring mode, press [M MODE/ ESC] to enter the parameter mode. Short press [◀ set / shift] to switch group codes. Press [▲ up / ▼ down] key to change the parameter code of the last two characters.
- ☐ Press and hold [◀ set/shift] in the parameter mode, and the system will immediately enter the setting mode. The display will also display the set value corresponding to this parameter. At this time, you can use [▲ up/ ▼ down] to modify the parameter value or press [M MODE/ESC] to exit the setting mode and return to the parameter mode.
- ☐ In the setting mode, short press [◀ set / shift] to move the flashing character to the left, and then use [▲ up / ▼ down] to quickly correct the higher setting character value.
- ☐ After the set value is corrected, long press [◀ set /shift] to save parameters or execute commands.
- ☐ After the parameter setting is completed, the display will automatically return to the parameter mode.

4.4 Display of Monitoring Status

Monitoring mode: 0-20 parameters are displayed. These parameters are read-only

The following table:

No.	Display Symbols	Contents	Unit	Address
0	PoS00	Feedback position - user unit	pulse	1001
1	PoS01	Given position - user unit	pulse	1002
2	PoS02	Position deviation - user unit	pulse	1003
3	PoS03	Feedback position - encoder unit	pulse	1004
4	PoS04	Given position - encoder unit	pulse	1005
5	PoS05	Position deviation - encoder unit	pulse	1006
6	SPd06	Given voltage of external analog input 1	0.1V	1007
7	SPd07	Speed setpoint	RPM	1008
8	SPd08	Speed operating value	RPM	1009
9	tor09	Given voltage of external analog input 2	0.1V	1010
10	tor10	Given torque	0.1%	1011
11	tor11	Feedback torque - average	0.1%	1012
12	tor12	Feedback torque - maximum	0.1%	1013
13	uoL13	Bus voltage	V	1014
14	tEP14	Radiator temperature	℃	1015
15	PuL15	External frequency setting	KHz	1016
16	H1P16	Hardware input port status	See table	1017
17	HoP17	Hardware output port status	See table	1018
18	S1P18	Software input function status 1	See table	1019
19	SIP19	Software input function status 2	See table	1020
20	SoP20	Software output function status	See table	1021

4.5 Parameter Saving

☐ In the panel operation mode, in the parameter modification interface, after setting the correct parameter value, long press [◄ set / shift] to display [- set -], indicating that the parameter is saved successfully.

☐ After the upper computer modifies the parameters through communication, if it needs to save the parameters, write 1 to p0-02 (communication address 2), and the server will save all the parameters.

4.6 Parameter Initialization

After entering parameter mode P5-11,

☐ Long press [◄ set / shift] to display its content value of 0.

☐ Press [▲ up] to modify the parameter to 1.

☐ Long press [◄ set / shift] to save the parameters.

☐ After restart, all system parameters (except motor parameters and alarm records) are initialized to default values.

4.7 Jog Mode Operation

After entering the parameter mode P5-00, the jog operation mode can be carried out according to the following setting methods:

☐ Long press [◄ set / shift] to display jog speed value. The initial value is 100 R / min;

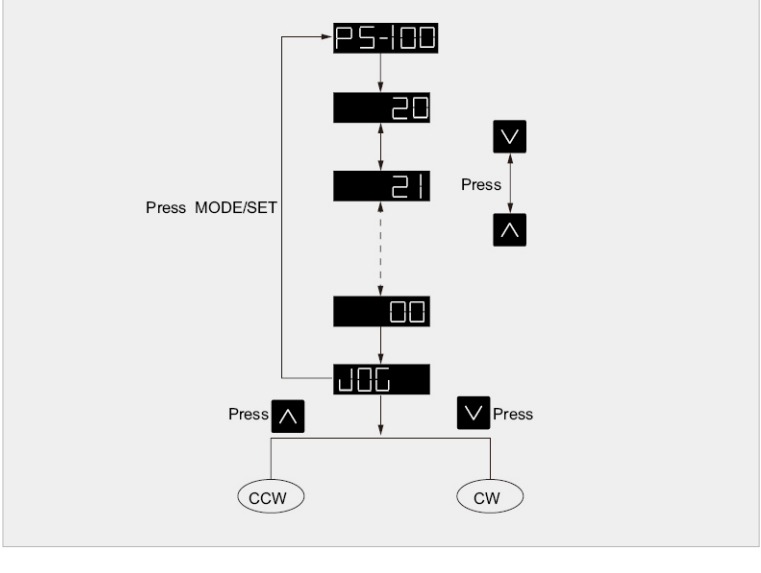
☐ Press [▲ up / ▼ down] to correct the desired jogging speed value;

☐ Long press the [◄ set / shift] key to display [- jog -], indicating entering the jog mode;

☐ Press the [▲ up/ ▼ down] key to rotate the servo motor in the positive or reverse direction. Release the key to stop the servo motor immediately;

☐ Press [M MODE / ESC] to exit jog mode.

Jog operation does not need to open SERVOON in advance



5.1 Checklist and Precautions Prior to Power-On

☐ Whether the motor is disconnected from the load.

☐ Whether the wiring and connection are correct and reliable.

☐ Check whether the power supply voltage supplied to the drive is normal.

☐ Whether the holding brake is opened in advance when the servo motor with holding brake is used. (the power supply voltage of holding brake is generally DC24V).

☐ Whether the drive matches the motor (specification and motor code).

5.2 Drive Power-On

User is advised to follow the steps below:

☐ First, confirm whether the drive model and motor model match;

☐ Confirm that the relevant lines between the motor and the drive are connected correctly:

U / V / W and PE must be connected correctly. If the connection is wrong, the motor will not operate normally. The motor ground wire PE must be connected with the heat dissipation shell of the drive. Please refer to Chapter III for wiring;

The encoder of the motor has been correctly connected to CN1: if only jog function is performed, CN2, CN3 and CN4 can not be connected;

☐ Connect the power line of the drive:

Connect the rated power supply required by the drive to L1, L2, R, S, T. If there is no three-phase 220V power supply, connect R and T, please ensure that the connected power supply voltage is within the rated range of the drive, otherwise the drive will be damaged;

☐ Supply power to drives L1, L2, R, S and T. when powered on, bScon will be displayed first, and then the current speed value 0 will be displayed by default. It is the factory default configuration. The motor is not enabled, that is, the speed is 0;

If the dealer is required to change the factory default configuration, the motor may operate according to the set value after power on;

☐ As for the alarm, the most common alarms during power on are encoder UVW line disconnection [Er111] and encoder ABZ line disconnection [Er112]. Please check whether the encoder is plugged in reliably;

In case of other alarms, please contact the supplier in time.

☐ Set the corresponding motor code in p5-01 parameter. (see Appendix I matching table of motor and drive for details)

The factory default motor code may not correspond to the motor you actually use.

5.3 Test Run with No Load

1、Jog Test Run

The inching mode only needs to connect the power line, motor power line and encoder line to run the motor.

After entering the parameter mode P5-00, the jog operation mode can be carried out according to the following setting methods.

☐ Long press [◄ set / shift] to display jog speed value. The initial value is 100 R / min.

☐ Press [▲ up / ▼ down] to correct the desired jog speed value.

☐ Long press the [◄ set / shift] key to display [- jog -], indicating entering the jog mode.

☐ Press the [▲ up / ▼ down] key to rotate the servo motor in the positive or reverse direction. Release the key to stop the servo motor immediately.

☐ Press [M MODE / ESC] to exit jog mode

Jog operation does not need to enable the servo drive, and SERVO is OFF.

2.Speed Mode Test Run

Example 1: without external signal, use [internal speed command 1] to run at 100 rpm.

☐ In case of factory default parameters (if not, please initialize the system parameters first)

☐ Check the values from P2-16 to P2-22 and confirm that the enable function [1] is not assigned, that is, the values of the seven input ports are not equal to 1 or 101. The motor is not enabled at this time. For the convenience of the following settings, set all 7 values to 0.

☐ Set the value of P2-29 to specify the source of speed command. Refer to the following table:

Parameter	Speed Switch2 【19】	Speed Switch1 【18】	Speed Switch0 【17】	Value	Command Source
P2-29=0	0	0	0	0	Analog speed input
	0	0	1	1	P1-36internal speed command 1
	0	1	0	2	P1-37internal speed command 2
	0	1	1	3	P1-38internal speed command 3
	1	0	0	4	P1-39internal speed command 4
	1	0	1	5	P1-40internal speed command 5
	1	1	0	6	P1-41internal speed command 6
	1	1	1	7	P1-42internal speed command 7
P2-29=2	Communication given, communication address 408				P4-08 = 0 default

☐ Set P2-29 = 0 to specify the use of internal speed command 1.
☐ Set P1-00 = 1 to speed mode.
☐ Set P1-36 = 100. Set the value of [internal speed command 1].
☐ Set P2-17 = 117. Select [internal speed command 1] as the running speed command.
☐ Set P2-16 = 101. Servo enable. At this time, the motor runs at 100 rpm.
☐ Change P1-36 = 200. At this time, the motor runs at 200 rpm. Can be changed to other speed values.
☐ P2-18 = 18 or 118, P2-19 = 19 or 119 can be set to switch the speed command source with P2-17 = 17 or 117. When the combined logic value is 0, the analog command will be used. When there is no external analog (suspended), the analog will have a small deviation, and the motor will rotate at a very low speed. When there is no deviation, the motor speed is 0 rpm.
☐ Finally, turn off the enable and set P2-16 = 0, because the parameters are saved by default. If they are not restored, the motor will be started directly at the next power on.
☐ Restore other parameters to the initial state. End debugging.

Example 2: 8 command sources are used for switching using external signals.
☐ Connect the input signals in1, in2, in3, in4, COM + and analog input signal VREF of CN2 port_ SPD，Vref_ GND。 Please refer to Chapter III for wiring.
☐ Set P2-16 = 1, P2-17 = 17, P2-18 = 18 and P2-19 = 19 to make in1, in2, in3 and in4 correspond to [enable], [speed switch 0], [speed switch 1] and [speed switch 2] respectively.
☐ Set P1-00 = 1 to speed mode.
☐ 10V of analog signal corresponds to the maximum speed of motor, which is set by parameter P1-25.
☐ Set P1-36 to P1-42 for different speed values.
☐ Select the speed command source through the external switch, turn on the enable switch, and the motor will run at the specified command speed.
☐ When the command is analog, adjust the analog voltage and the motor speed will change accordingly.
☐ Turn off enable and end debugging.

Example 3: use the communication command to run the motor.
☐ Connect CN3 / CN4 communication cable. Please refer to Chapter III for wiring.
☐ Check P4-00 communication station number (communication ID of servo) and P4-01 baud rate. Please refer to the corresponding parameters in Chapter 7.
☐ Set P1-00 = 1 to speed mode.
☐ Set P2-29 = 2 to specify the given communication.
☐ Referring to example 1 or example 2, connect the enable signal and set the corresponding parameters. Enable the motor.
☐ Write the speed command value to the communication address 408, and the motor will run at the written speed command value.

☐ Change the speed command value of communication address 408 and observe the change of motor speed.
☐ Changing the torque limit value of communication address 409 will limit the torque.
☐ Write 0 to the communication address 408 and the motor stops running.
☐ Turn off the enable and restore the set value to end debugging.

3.Position Mode Test Run

Parameter Setting	Preferences	Parameter Setting	Command Mode
P2-28=0	External pulse	P1-05=0	Pulse + direction
		P1-05=1	Positive pulse + negative pulse
		P1-05=2	Quadrature pulse
P2-28=2	Internal settings	Triggered by running [24] at the internal position of the input function	
		Number of internal position commands = (P1-08) × Number of encoder lines × 4)+P1-09	

Example 1: run the motor by external pulse.
☐ Determine whether the external pulse signal is a differential signal or a collector signal.
☐ Connect the input signals in1 and COM + of CN2 port, and the differential signals are connected with PLUSE +, PLUSE -, DIR +, DIR -. Collector signal connection PLUSE_ P、PLUSE-、DIR_ P. DIR - (2k resistor has been integrated internally).
☐ Set P1-00 = 0 to position mode.
☐ Set P2-28 = 0 and use external pulse command.
☐ Set P1-05 according to the pulse form.
☐ Set P2-16 = 1 (input pin is defined as [enable] function) and turn on enable.
☐ Send pulse command. Every 10000 pulses are sent, the motor runs for one cycle.
☐ Turn off enable. And restore the set value to end debugging.

Example 2: run the motor through internal settings.
☐ Connect the input signals IN1, IN2, COM + of CN2 port.
☐ Set P1-00 = 0 to position mode.
☐ Set P1-08 = 1 (1 turn = 10000 pulses) and P1-09 = 5000 (5000 pulses).
☐ Number of internal position commands = (P1-08) × Number of encoder lines × 4) + P1-09 = 15000 pulses = 1.5 turns.
☐ Set P1-36 = 100, the maximum speed of motor operation.
☐ Set P2-28 = 2 and use the internal pulse command.
☐ Set P1-10 = 100, and the acceleration time of internal command operation is 100ms.
☐ Set P1-11 = 100, and the deceleration time of internal command operation is 100ms.
☐ Set P2-16 = 1 and turn on enable.
☐ Set P2-17 = 24 to trigger the internal position command. Each time it is triggered, the motor runs for 1.5 turns. It can be changed by parameters.
☐ Turn off enable. And restore the set value to end debugging.

4.Torque Mode Test Run

☐ Connect the input signal IN1, COM + and analog input signal VREF of CN2 port_ SPD，Vref_ GND，Vref2_ TOR，Vref_ GND.
☐ Set the torque according to the following table:

Parameter Setting	Torque switching1【21】	Torque switching0【20】	Value	Command Source
P2-30=0	0	0	0	Analog torque input
	0	1	1	P1-43internal torque command 1
	1	0	2	P1-44internal torque command 2
	1	1	3	P1-45internal torque command 3
P2-30=2	Communication given, communication address 409			P4-09 = 0 default

☐ Set P1-00 = 2 to torque mode.
☐ Set P1-35 = 1 to open the speed limit. The limit value is set by the following three software functions:

Speed limit 2 [16]	Speed limit 1 [15]	Speed limit 0 [14]	Value	Command Source
0	0	0	0	Analog speed input
0	0	1	1	P1-36internal speed command 1
0	1	0	2	P1-37internal speed command 2
0	1	1	3	P1-38internal speed command 3
	Communication given, communication address 409			P4-09 = 0 default

If the three values are not set, the analog speed input will be used.
☐ Set P2-16 = 1 and turn on enable.
☐ Adjust the speed given analog command and torque analog command. When the external torque is greater than the torque command, the motor speed is 0. When the external torque is less than the torque command, the motor will run to the analog speed command value.
☐ Turn off enable. And restore the set value to end debugging.

5.4 Test Run after connecting Servo Motor and Machine

Warning: when the machine is connected to the servo motor, if an operation error occurs, it will not only cause mechanical damage, but also sometimes personal safety. If the forward rotation disable [5] and reverse rotation disable [6] are not set, please connect the external signal and set it correctly to make the protection function effective.

5.5 Test Run of Servo Motor with Holding Brake

Test run of servo motor with holding brake
☐ When using the brake, please pay attention to the following points for trial operation. Before confirming the action of the brake, be sure to take measures to prevent the machinery from falling naturally or vibration caused by external forces.
☐ Please confirm the action of servo motor and brake when servo motor and machinery are separated. If there is no problem, please connect the servo motor to the machine and conduct the test run again.

6.1 Selection of Control Mode

The drive provides three basic operation modes (position, speed and torque) and three mixed operation modes (position-speed, speed-torque and position-torque). The steps of mode switching are as follows:

☐ Switch the drive to the SERVO OFF state, that is, turn off the servo enable.

☐ Change parameter P1-00 to the corresponding operating mode.

☐ Before switching the drive to the SERVO ON state, please confirm the state of the corresponding command to ensure safety.

☐ Switch the drive to SERVO ON to continue.

The following table lists the available command sources and corresponding parameters in each control mode:

Parameter Setting	Control Mode	Parameter Setting	Command Source	Parameter Setting	Command Mode
P1-00=0	Position Mode	P2-28=0	External pulse	P1-05=0	Pulse + direction
				P1-05=1	Positive pulse + negative pulse
				P1-05=2	Quadrature pulse
		P2-28=2	Internal settings	Triggered by running [24] at the internal position of the input function	
P1-00=1	Speed mode	P2-29=0	Analog quantity setting ± 10V	Vref1_SPD and Vref_GND	Input function by software; Speed switching 0 [17] Speed switching 1[18] Speed switching 2 [19] determine command source
			Internal speed command 1	P1-36 = 0 default	
			Internal speed command 2	P1-37 = 0 default	
			Internal speed command 3	P1-38 = 0 default	
			Internal speed command 4	P1-39 = 0 default	
			Internal speed command 5	P1-40 = 0 default	
			Internal speed command 6	P1-41 = 0 default	
			Internal speed command 7	P1-42 = 0 default	
		P2-29=2	Communication given	P4-08 = 0 default	Communication address 408

Parameter Setting	Control Mode	Parameter Setting	Command Source	Parameter Setting	Command Mode
P1-00=2	Torque Mode	P2-30=0	Analog quantity setting ± 10V	Vref2_TOR and Vref_ GND	Input function by software, Torque switch 0 [20], torque switch 1 [21] determine the command source
			Internal torque setting 1	P1-43 = 0 default	
			Internal torque setting 2	P1-44 = 0 default	
			Internal torque setting 3	P1-45 = 0 default	
		P2-30=2	Communication given	P4-09 = 0 default	Communication address 409
P1-00=3	Position-speed	P-S=0	Position mode	It is switched by the software input function (position speed mode switching 【25】 P-S)	
		P-S=1	Speed mode		
P1-00=4	Speed-torque	S-T=0	Speed mode	It is switched by the software input function (speed torque mode switching [26] S-T)	
		S-T=1	Torque mode		
P1-00=5	Position - torque	P-T=0	Position mode	It is switched by software input function (position torque mode switch 【27】 P-T)	
		P-T=1	Torque mode		

7.1 Parameter Definition

Parameter mode: contains parameters of 0-5 groups.

The first character after the parameter start code P is a group character, and the next two are parameter characters.

The parameter group is defined as follows:

Group 0: status viewing parameters	(e.g. P0-XX)
Group 1: basic control parameters	(e.g. P1-XX)
Group 2: gain switching and IO port control parameters	(e.g. P2-XX)
Group 3: automatically adjust parameters	(e.g. P3-XX)
Group 4: serial communication parameters	(e.g. P4-XX)
Group 5: system parameters	(e.g. P5 XX)

7.2 Parameter Description P0-XX

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status
P0-01	Power-on default display	8		0-20	Restart	1	Read/ Write
	Note: in the monitoring state, display the contents displayed by the nixie tube (see 4.4 display of monitoring state in the manual for details)						
P0-02	Communication save parameter command	0		0-1	At once	2	Read/ Write
	Note: write 1 for communication and save parameters.						
P0-05	Alarm Record N					5	Read Only
P0-06	Alarm Record N-1					6	Read Only
P0-07	Alarm Record N-2					7	Read Only
P0-08	Alarm Record N-3					8	Read Only
P0-09	Alarm Record N-4					9	Read Only
	Note: historical alarm record, N is the latest record						

7.3 Parameter Description P1-XX

Parameter No.	Parameter Name	Default Value	Unit	Range of value	Entry-Into-Force Time	Address	Read/ Write Status
P1-00	Operation mode	0		0-5	SOFF	100	Read/ Write
	Note: please confirm that the servo is in SERVO OFF state before changing the operation mode.						
	Data content	Operation Mode					
	0	Position Mode					
	1	Speed Mode					
	2	Torque Mode					
	3	Position- Speed					
	4	Speed -Torque					
	5	Position - Torque					
P1-01	Motor direction	0		0-1	At once	101	Read/ Write
	Note: 0: run in positive direction; 1: run in the opposite direction.						
P1-02	Stop mode of motor in emergency	0		0-1	At once	102	Read/ Write
	Note: when the emergency stop, left limit and right limit signals are valid, 0: free stop; 1: Slow down and stop according to p1-22 setting. Note: only valid in speed mode.						
P1-03	Encoder frequency division output polarity	0		0-1	At once	103	Read/ Write
	Note: 0: polarity is not reversed; 1: polarity is reversed.						
P1-04	Encoder frequency division	1		1-127	At once	104	Read/ Write
	Note: 1: no frequency division; 2-127 is the frequency division number.						

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/Write Status
P1-05	External pulse input form	0		0-152	At once	105	Read/Write

Hundred digit	Ten digit	Bandwidth	Single digit	Pulse Mode
0		Full bandwidth: 500KHz	0	Pulse + direction
1		Bandwidth: 200KHz	1	Double pulse
2		Bandwidth: 125KHz	2	AB pulse
3		Bandwidth: 100KHz		
4		Bandwidth: 75KHz		
5		Bandwidth: 60KHz		
6		Bandwidth: 50KHz		
7		Bandwidth: 45KHz		
8		Bandwidth: 40KHz		
9		Bandwidth: 35KHz		
10		Bandwidth: 32.5KHz		
11		Bandwidth: 30KHz		
12		Bandwidth: 27.5KHz		
13		Bandwidth: 25KHz		
14		Bandwidth: 22.5KHz		
15		Bandwidth: 20KHz		

P1-06	Position command smoothing constant	0	ms	0-127	SOFF	106	Read/Write

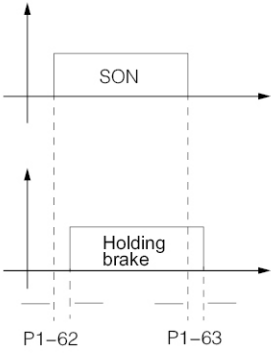
Note: when changing the set value, please confirm that the servo is in the servo off state. At this time, servo command acceptance is delayed. The smoothing function refers to the function of filtering the position command to make the rotation of the servo motor smoother. This function is more effective in the following situations.

- ☐ when the upper device sending the command does not accelerate or decelerate
- ☐ when the command pulse frequency is very low

Note: the smoothing function has no effect on the movement amount (number of command pulses).

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status
P1-07	Pulse reset mode	0		0-1	At Once	107	Read/ Write
	Note: 0: triggered along the edge; 1: The level is valid. Corresponding software input function 【3】 pulse clearing.						
P1-08	Internal position command - turn	1	1 turn	0-30000	At Once	108	Read/ Write
P1-09	Internal position command - encoder unit	0	pulse	0-32767	At Once	109	Read/ Write
	Note: number of internal position instructions = (P1-08 × Number of encoder lines × 4)+P1-09.						
P1-10	Internal position command run acceleration time	100	ms	0-1000	At Once	110	Read/ Write
	Note: when the internal position comm and is running, it takes time to accelerate from 0 to 3000rpm.						
P1-11	Internal position command operation deceleration time	100	ms	0-1000	At Once	111	Read/ Write
	Note: when the internal position command is running, the time to decelerate from 3000rpm to 0.						
P1-12	Electronic gear ratio numerator 1	1		1-30000	At Once	112	Read/ Write
P1-13	Electronic gear ratio denominator 1	1		1-30000	At Once	113	Read/ Write
	Note: when the input voltage of the external power supply is higher than the set value, the alarm Er016 is generated.						
P1-53	Maximum speed limit (matching motor parameters)		RPM	100-3500	At Once	153	Read/ Write
	Note: the maximum speed of motor operation. When the given command exceeds this value, the command is limited to the set value.						

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status
P1-54	Maximum torque limit (matching motor parameters)		0.10%	10-3000	At Once	154	Read/ Write
	Note: the maximum torque of motor operation. When the given command exceeds this value, the command is limited to the set value.						
P1-55	Undervoltage protection threshold	150	VAC	100-240	At Once	155	Read/ Write
	Note: when the input voltage of the external power supply is lower than the set value, the alarm Er017 is generated.						
P1-56	Overvoltage protection threshold	275	VAC	260-290	At Once	156	Read/ Write
	Note: when the input voltage of the external power supply is higher than the set value, the alarm Er016 is generated.						
P1-57	Over temperature alarm threshold	75	°C	35-85	At Once	157	Read/ Write
	Note: when the radiator temperature > = the set value, the alarm Er015 is generated.						
P1-58	Motor overload protection threshold	1000	0.10%	800-1200	At Once	158	Read/ Write
P1-59	Motor overload rate	75	%	1-100	At Once	159	Read/ Write
	Note: when the motor torque is greater than the motor overload protection threshold, start to calculate the motor overload, and judge according to the overload rate of the motor. When the overload rate of the motor is exceeded, the alarm Er108 is generated.						
P1-62	Opening delay time of electromagnetic holding brake	0	ms	0-900	At Once	162	Read/ Write Status
	Note: set the delay time from servo start ON to electromagnetic brake interlock signal						

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status
P1-63	Closing delay time of electromagnetic holding brake	0	ms	0-900	At Once	163	Read/ Write Status
	Note: set the delay time from the end of servo preparation OFF to the closing of electromagnetic brake interlock signal.						
							
P1-64	Resistance value of braking resistor	60	Ω	30-330	At Once	164	Read/ Write Status
	Note: set the resistance value of braking resistor.						
P1-65	Power of braking resistor	60	W	30-7500	At Once	165	Read/ Write Status
	Note: set the power of braking resistor.						
P1-66	Utilization rate of braking resistor	100	%	30-1000	At Once	166	Read/ Write Status
	Note: set the utilization rate of braking resistor. When set to 100, when the power generated by braking is equal to the power of braking resistor, alarm ER106 is generated.						

7.4 Parameter Description P2-XX

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status
P2-00	Position control proportional gain 1	100	rad/s	25-2000	At Once	200	Read/ Write Status
P2-04	Position feedforward gain	0	0.01	0-100	At Once	204	Read/ Write Status
	Note: when the position control command changes smoothly, increasing the gain value can improve the position following error. If the position control command does not change smoothly, reducing the gain value can reduce the operating vibration of the mechanism.						
P2-05	Position feedforward smoothing coefficient	80	ms	0-200	At Once	205	Read/ Write Status
	Note: when the position control command changes smoothly, reducing the smoothing constant value can improve the position following error. If the position control command does not change smoothly, increasing the smoothing constant value can reduce the operating vibration of the mechanism.						
P2-06	Speed control proportional gain 1	2000	rad/s	20-4000	At Once	206	Read/ Write
P2-10	Velocity integral compensation	20	%	1-200	At Once	210	Read/ Write
	Note: when the integral value of speed control increases, the speed response can be improved and the speed control error can be reduced. When the setting is too large, it is easy to produce vibration and noise.						
P2-15	Digital input filter time	2		0-7	At Once	215	Read/ Write
	Note: when the ambient noise is large, increasing the set value can increase the control reliability. If the value is too large, the response time will be affected.						
P2-16	Digital input port 1 function planning	0		0-128	At Once	216	Read/ Write
P2-17	Digital input port 2 function planning	0		0-128	At Once	217	Read/ Write
P2-18	Digital input port 3 function planning	0		0-128	At Once	218	Read/ Write

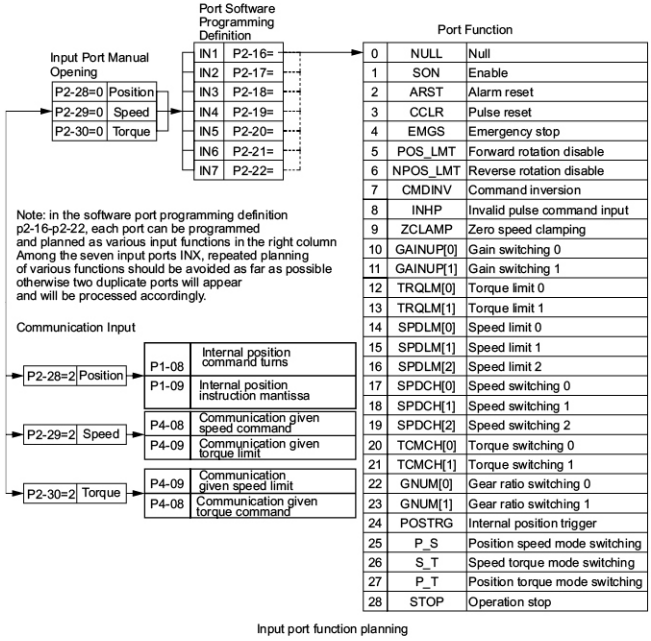
Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status
P2-19	Digital input port 4 function planning	0		0-128	At Once	219	Read/ Write
P2-20	Digital input port 5 function planning	0		0-128	At Once	220	Read/ Write
P2-21	Digital input port 6 function planning	0		0-128	At Once	221	Read/ Write
P2-22	Digital input port 7 function planning	0		0-128	At Once	222	Read/ Write

Note:

Hundred digit		Hundred digit	
Value	Note	Value	Note
0	External node closing input signal valid	1	External node open, input signal is valid

Ten digit Single digit		Ten digit Single digit		Ten digit Single digit	
0	none	10	gain switch 0	20	torque switch 0
1	enable	11	gain switch 1	21	torque switch 1
2	alarm reset	12	torque limit 0	22	gear ratio switch 0
3	pulse reset	13	torque limit 1	23	gear ratio switch 1
4	emergency stop	14	speed limit 0	24	internal position operation trigger
5	forward rotation disabled	15	speed limit 1	25	position speed mode switch
6	reverse disabled	16	speed limit 2	26	speed torque mode switch
7	command reverse	17	speed limit 2	27	position torque mode switch
8	Invalid pulse command input	18	speed limit 2	28	operation stop
9	zero speed box position	19	speed switch 2		

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status



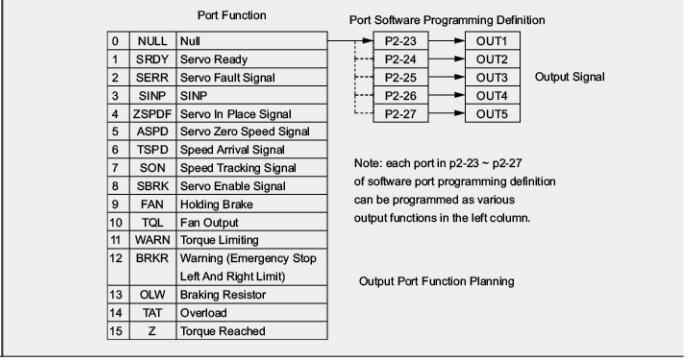
Input port function planning

P2-23	Digital output 1 function planning	0		0-115	At Once	223	Read/ Write
P2-24	Digital output 2 function planning	0		0-115	At Once	224	Read/ Write
P2-25	Digital output 3 function planning	0		0-115	At Once	225	Read/ Write
P2-26	Digital output 4 function planning	0		0-115	At Once	226	Read/ Write

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status
P2-27	Digital output 5 function planning	0		0-115	At Once	227	Read/ Write

Note:

Hundred Digit		Ten Digit	Single Digit	
Value	Note	Value	Note	Corresponding parameters
0	Output contact Normally open contact	0		
		1	Servo preparation signal	
		2	Servo fault signal	
1	Output contact Normally close contact	3	Servo position arrival signal	P1-50
		4	Servo zero speed signal	P1-47
		5	Servo speed arrival signal	P1-48
		6	Servo speed tracking completion signal	P1-49
		7	Servo enable signal	
		8	Holding brake output	P1-62，P1-63
		9	Fan output	
		10	Torque limiting	
		11	Warning output - emergency stop, left and right limit	
		12	Servo braking resistor on signal	
		13	Overload	
		14	Torque reached	P1-46
		15	Z signal output	



7.5 Parameter Description P4-XX

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status
P4-00	485 communication station No.	1		0-127	At Once	400	Read/ Write
	Note: Set the communication address of the servo.						
P4-01	485 communication baud rate	8000		0-8111	At Once	401	Read/ Write
	Description: the data bits are 8 digits						
	Thousand Digit	Hundred Digit		Ten Digit		Single Digit	
	Baud rate	Parity check		Check enable		Stop position	
	0 2400	0	Odd check	0	No check	0	1Stop position
	1 4800	1	Even check	1	Check	1	2Stop position
	2 9600						
	3 14400						
	4 19200						
	5 28800						
	6 38400						
	7 57600						
	8 115200						
P4-02	485 communication protocol	0		0-2	At Once	402	Read/ Write
	Note: 0: MODBUS RTU protocol. Currently only one protocol is supported.						
P4-05	Interval between communication bytes	0		0-255	At Once	405	Read/ Write
	Note: interval between communication bytes = set value / baud rate.						
P4-06	Communication reply delay time	0	ms	0-999	At Once	406	Read/ Write
	Note: the interval between the end of the upper computer query frame received by the servo and the response frame sent by the servo.						

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status
P4-08	Communication given speed command	0	PRM	-3000-+3000	At Once	408	Read/ Write
	Note: Communication given speed command						
P4-09	Communication given torque command	0	0.10%	-3000-+3000	At Once	409	Read/ Write
	Note: communication given torque command.						

7.6 Parameter Description P5-XX

Parameter No.	Parameter Name	Default Value	Unit	Range of values	Entry-Into-Force Time	Address	Read/ Write Status
P5-00	JOG speed and JOG control	100		-3000-+3000	At Once	500	Read/ Write
	Note: the parameter value is the speed command value of JOG operation. Click the OK key to enter the JOG mode, and then press the up and down keys to run the motor according to the set value. The external enabling signal needs to be turned off before JOG.						
P5-01	Motor code	200		0-32767	Restart	501	Read/ Write
	Note: set the corresponding motor code according to the actual motor model. (refer to Appendix I matching table of motor and drive)						
P5-11	System parameter initialization	0		0-999	Restart	511	Read/ Write
	Note: set to 1, restart after saving, and restore the parameters to the factory settings.						

8.1 Communication Protocol

This drive supports MODBUS communication mode slave protocol. It can communicate with the main machine using MODBUS-RTU protocol.

The supported function codes are: 03, 06, 16.

Read single holding register 03H					
Query		Example	Response		Example
Slave Address	Slave Address	01H	Slave Address	Slave Address	01H
Function Code	03H	03H	Function Code	03H	03H
Address High Byte	Address High Bit	00H	Number of Bytes	02H	02H
Address Low Byte	Address Low Bit	88H	Data High Byte	Data High Bit	00H
Quantity High Byte	00H	00H	Data Low Byte	Data Low Bit	00H
Quantity Low Byte	01H	01H	CRC High Byte	CRC Low Bit	B8H
CRC High Byte	CRC High Bit	04H	CRC Low Byte	CRC High Bit	44H
CRC Low Byte	CRC Low Bit	20H			

Note: CRC verification low bit is in front and high bit is in back.

Read Multiple Holding Registers 03H					
Query		Example	Response		Example
Slave Address	Slave Address	01H	Slave Address	Slave Address	01H
Function Code	03H	03H	Function Code	03H	03H
Address High Byte	Address High Bit	00H	Number of Bytes	Number of Bytes	04H
Address Low Byte	Address Low Bit	88H	Data 1 High Byte	Data 1 High Bit	00H
Quantity High Byte	Quantity High Bit	00H	Data 1 Low Byte	Data 1 Low Bit	00H
Quantity Low Byte	Quantity Low Bit	02H	Data 2 High Byte	Data 2 High Bit	00H
CRC High Byte	CRC High Bit	44H	Data 2 Low Byte	Data 2 Low Bit	00H
CRC Low Byte	CRC Low Bit	21H	CRC High Byte	CRC Low Bit	FAH
			CRC Low Byte	CRC High Bit	33H

Note: multiple register operations are exemplified by 2 data. The starting address is 136 [88H], corresponding to parameter P1–36, and the parameter value range is – 3000 ~ + 3000.

Read single holding register 06H					
Query		Example	Response		Example
Slave Address	Slave Address	01H	Slave Address	Slave Address	01H
Function Code	06H	06H	Function Code	06H	06H
Address High Byte	Address High Bit	00H	Address High Byte	Address High Bit	00H
Address Low Byte	Address Low Bit	88H	Address Low Byte	Address Low Bit	88H
Quantity High Byte	Quantity High Bit	00H	Data High Byte	Data High Bit	00H
Quantity Low Byte	Quantity Low Bit	64H	Data Low Byte	Data Low Bit	64H
CRC High Byte	CRC High Bit	08H	CRC High Byte	CRC Low Bit	08H
CRC Low Byte	CRC Low Bit	0BH	CRC Low Byte	CRC High Bit	0BH

Read Multiple Holding Registers 10H					
Query		Example	Response		Example
Slave Address	Slave Address	01H	Slave Address	Slave Address	01H
Function Code	10H	10H	Function Code	10H	10H
Address High Byte	Address High Bit	00H	Address High Byte	Address High Bit	00H
Address Low Byte	Address Low Bit	88H	Address Low Byte	Address Low Bit	88H
Quantity High Byte	Quantity High Bit	00H	Quantity High Byte	Quantity High Bit	00H
Quantity Low Byte	Quantity Low Bit	02H	Quantity Low Byte	Quantity Low Bit	02H
Number of Bytes	Number of Bytes	04H	CRC High Byte	CRC Low Bit	C1H
Data 1 High Byte	Data 1 High Bit	00H	CRC Low Byte	CRC High Bit	E2H
Data 1 Low Byte	Data 1 Low Bit	64H			
Data 2 High Byte	Data 2 High Bit	00H			
Data 2 Low Byte	Data 2 Low Bit	C8H			
CRC High Byte	CRC High Bit	BAH			
CRC Low Byte	CRC Low Bit	20H			

8.2 Communication Parameters And Address

☐ 0-20 parameters in monitoring mode, refer to Chapter IV panel display and operation.

☐ In parameter mode, the parameters of 0-5 groups can be read through communication. See the parameter description in Chapter VII for the specific communication address. The parameters in monitoring mode are read-only.

9.1 Causes of Alarms and Troubleshooting

Code	Name/Reason	Content/Confirmation Method	Troubleshooting
Er001	Excessive current in main circuit	The main circuit current exceeds the module protection threshold	Power on again
	Wrong wiring of main circuit cable or motor cable	Confirm whether the wiring is correct	Correct wiring
	Internal short circuit of main circuit cable or motor cable	Confirm that the cable UVW is interphase and is there a short circuit between UVW and ground	Replace the cable
	Internal short circuit or grounding short circuit of servo motor	Confirm that the motor terminal UVW is interphase, and is there a short circuit between UVW and ground	Possible servo motor failure. Replace the servo motor
	Short circuit or short circuit to ground inside the drive	Confirm that the drive terminal UVW is interphase, and is there a short circuit between UVW and ground	Possible drive failure. Replace the drive
	Malfunction due to interference	Improve the wiring, setting and other environment to see if there is any effect	Take measures to reduce EMC, such as correct grounding, etc
	drive module failure	When the power is turned on again, the alarm still occurs	Replace the drive
Er002	Current U-phase sensor fault	The deviation of U-phase current sensor is too large	
	Current U-phase sensor fault	When the power is turned on again, the alarm still occurs	Replace the drive
Er003	Current V-phas e sensor fault	Excessive deviation of V-phase current sensor	
	Current V-phase sensor fault	When the power is turned on again, the alarm still occurs	Replace the drive
Er004	Large phase current	The UVW phase current is detected to exceed its maximum current	
	Poor or wrong wiring of motor and encoder	Confirm wiring	Correct wiring
	Excessive motor load leads to excessive instantaneous current	Confirm the load condition, confirm the operation command and motor speed	Improve load conditions
	Current sensor fault	When the power is turned on again, the alarm still occurs	Replace the drive

Code	Name/Reason	Content/Confirmation Method	Troubleshooting
Er005	Brake overcurrent	The instantaneous current of braking circuit exceeds 2 times of its normal curren t	
	The braking resistor is too small or short circuited	When external braking, confirm the braking resistance value (see reference table)	Replace the brake resistor
	Brake sampling circuit fault	When the power is turned on again, the alarm still occurs	Replace the drive
Er006	Power-on charging failure	After power-on, the main circuit has no voltage or the voltage is far lower than the normal value	
	Main circuit RST power supply failure	Confirm whether the wiring is correct, whether the connection is reliable and whether there is AC220V voltage	Correct wiring and power supply
	Main circuit starting circuit fault	When the power is turned on again, the alarm still occurs	Replace the drive
Er007	Memory failure	EEPROM data read / write error	
	The number of parameter writes exceeded the maximum	Confirm whether the upper	Parameter initialization
	The number of parameter writes exceeded the maximum	Confirm whether the upper computer writes parameters frequently	Repair or replace the servo drive and change the parameter writing method.
Er008	Logic chip communication failure	Abnormal communication between logic chip and DSP	Replace the drive
Er009	Analog input 1 sampling error	The input voltage of analog input port 1 exceeds the set value of P1-28	
	The input voltage is greater than 10V or less than - 10V	Confirm the input voltage value	The limited input voltage is within ± 10V
	P1-28 setpoint too small	Confirm parameter value	Change P1-28 setpoint, and Max is 10000
	Sampling circuit fault	When the power is turned on again, the alarm still occurs	Replace the drive

Code	Name/Reason	Content/Confirmation Method	Troubleshooting
Er010	Analog input 2 sampling error	The input voltage of analog input port 2 exceeds the set value of P1-33	
	The input voltage is greater than 10V or less than - 10V	Confirm the input voltage value	The limited input voltage is within ± 10V
	P1-33 setpoint too small	Confirm parameter value	Change P1-33 setpoint, and Max is 10000
	Sampling circuit fault	When the power is turned on again, the alarm still occurs	Replace the drive
Er015	Overtemperature	The drive temperature exceeds the setting of P1-57	
	Ambient temperature too high	Confirm ambient temperature	Reduce ambient temperature
	The continuous use temperature of the drive is too high	Measure whether the drive heat sink temperature is greater than the set value of P1-57	Stop the machine for cooling before running
	The setting of P1-57 is too low		Set appropriate parameter values
Er016	Overpressure	The external input voltage exceeds the value of (P1-56)	
	The interphase input voltage of the drive RST is higher than the set value	Measure the input power supply voltage	Adjust the input voltage to the product specification range
	The braking resistor is greater than the operating conditions	Confirm the operating conditions and regenerative resistor value	Considering the operating conditions and load, replace the braking resistor
	Operate above the allowable load moment of inertia	Confirm that the load moment of inertia ratio is within the allowable load moment of inertia ratio	Extend deceleration time or reduce load
Er017	Undervoltage	The voltage of the main circuit bus is below (P1-55)	
	The interphase input voltage of the drive RST is lower than the set value	Measure the input power supply voltage	Adjust the input voltage to the product specification range
	Power supply voltage drop during operation	Measure the input power supply voltage	Increase power capacity

Code	Name/Reason	Content/Confirmation Method	Troubleshooting
Er101	Motor does not match hardware	The drive cannot drive the motor model corresponding to P5-01	Check the matching table of drive and motor and reset
	Setpoint does not match motor		Replace the drive
Er102	Abnormal system parameters	System parameter reading error	Parameter initialization
Er103	Excessive pulse frequency	The speed obtained by inputting pulse frequency x gear ratio exceeds the maximum speed of the motor	Reduce the input pulse frequency and set the appropriate gear ratio
Er104	Excessive position deviation	The position deviation exceeds the setting of P1-51	
	Servo motor UVW wiring incorrect	Confirm wiring	Confirm that the wiring is correct and the contact is good
	The pulse frequency of the position command is too high	Confirm the frequency of the input pulse	Reduce the pulse frequency or adjust the electronic gear ratio
	Excessive acceleration of position command	Confirm command acceleration time	Increase command acceleration time
	The position deviation exceeds the setting of P1-51	Confirm the setting of P1-51	Set appropriate parameter values
Er105	Over-speed	The motor speed exceeds the setting of P1-52	
	The actual running speed is less than the maximum speed of the motor	Confirm whether the set value is too small	Set appropriate parameter values
	The command input value exceeds the detection set value	Confirm input command	Lower command
	The motor speed exceeds the maximum speed	Confirm motor operation waveform	Adjust the gain or adjust the operating conditions

Code	Name/Reason	Content/Confirmation Method	Troubleshooting
Er106	Braking overload	The braking energy will soon exceed the overload capacity of braking resistor	
	The motor is driven by external force	Confirm operating conditions	Do not drive the motor by external force
	The energy generated by motor deceleration exceeds the capacity of braking resistor	Confirm the load and operation	Reduce the load inertia ratio, increase the deceleration time and reduce the speed.
Er107	Brake over-pressure	Main circuit bus voltage exceeds (P1-56) × Value of 1.414	
	Too much braking energy in a short time	Confirm the load and operation	Reduce the load inertia ratio, increase the deceleration time and reduce the speed.
	The resistance of braking resistor is too large	Confirm the resistance value of braking resistor	Replace the braking resistor or external braking resistor
Er108	Overpower	The load rate of motor and drive exceeds the set value of P1-58 / 59	
	Poor wiring or connection of motor and encoder	Confirm wiring	Confirm whether the motor wiring and encoder wiring are correct and in good contact
	The motor operation exceeds the overload protection characteristics	Confirm the overload characteristics and operation command of the motor	Reconsider load conditions, operating conditions or motor capacity
	The motor cannot be driven due to excessive load due to mechanical reasons	Confirm the operation command and motor speed	Improve mechanical factors
Er111	Encoder UVW line broken	Abnormal encoder UVW signal	
	Encoder wiring error	Confirm wiring	Correct wiring
	Encoder cable internal wiring error	Check whether there is open circuit or short circuit inside the encoder cable	Replace the cable
	Poor contact of the connector	Confirm whether the connector is in good contact and whether the pin is in good condition	Replace the cable or replace the drive
Er112	Encoder ABZ line broken	Abnormal encoder ABZ signal	
	Encoder wiring error	Confirm wiring	Correct wiring

Code	Name/Reason	Content/Confirmation Method	Troubleshooting
Er112	Encoder cable internal wiring error	Check whether there is open circuit or short circuit inside the encoder cable	Replace the cable
	Poor contact of the connector	Confirm whether the connector is in good contact and whether the pin is in good condition	Replace the cable or replace the drive
Er201	Servo emergency stop	Emergency stop signal detected	
	External emergency stop signal input	Confirm the status of emergency stop signal	Change emergency stop signal status
	Signal function port planning error	Confirm whether the IO input port corresponding to the input port function planning is correct	Set the correct IO input port
	Signal logic setting error	Confirm signal logic setting	Set the correct signal logic
	Corresponding IO port hardware failure		Replace the IO port or replace the drive
Er202	Servo reverse disable	Reverse disable signal detected	
	There is an external reverse disable signal input	Confirm input signal status	Change input signal status
	Signal function port planning error	Confirm whether the IO input port corresponding to the input port function planning is correct	Set the correct IO input port
	Signal logic setting error	Confirm signal logic setting	Set the correct signal logic
	Corresponding IO port hardware failure		Replace the IO port or replace the drive
Er203	Servo forward disable	Forward rotation disable signal detected	
	There is an external forward rotation disable signal input	Confirm input signal status	Change input signal status
	Signal function port planning error	Confirm whether the IO input port corresponding to the input port function planning is correct	Set the correct IO input port
	Signal logic setting error	Confirm signal logic setting	Set the correct signal logic
	Corresponding IO port hardware failure		Replace the IO port or replace the drive

Appendix I Matching Table of Motor and Drive

The motor code corresponds to P5-01 parameter and takes effect after restart.

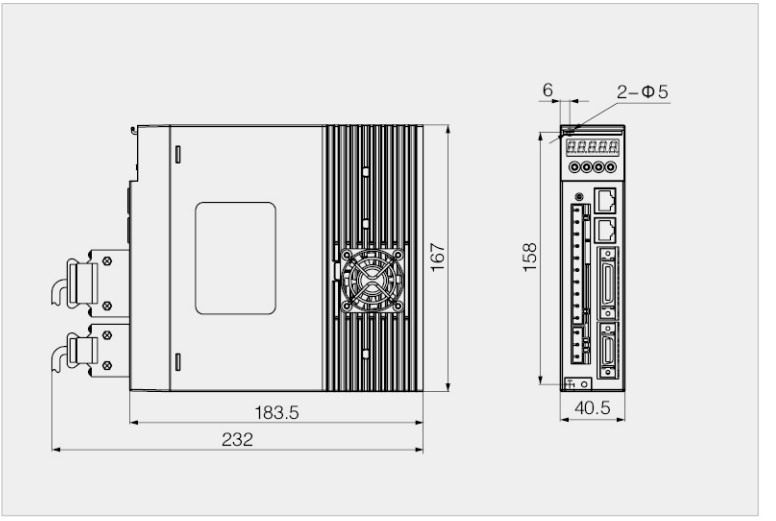
Drive model	Motor code	Power (kW)	Motor model	Speed (RPM)	Torque (N.m)	Maximum Torque	Voltage (V)
BSDA010A	100	0.05	BSM40-05M001D	3000	0.16	0.32	220
	110	0.1	BSM40-10M003D	3000	0.32	0.64	220
BSDA020A	200	0.2	BSM60-20M006D	3000	0.637	1.91	220
BSDA030A	300	0.4	BSM60-40M012D	3000	1.27	3.6	220
	301	0.4	BSM80-40M012D	3000	1.27	3.8	220
	302	0.6	BSM110-60M020D	3000	2	6	220
	303	0.6	BSM60-20M019D	3000	1.91	4.3	220
	304	0.73	BSM80-73M035B	2000	3.5	9.3	220
	305	0.75	BSM80-75M024D	3000	2.39	6.3	220
	306	0.73	BSM90-73M035B	2000	3.5	9.3	220
	307	0.75	BSM90-75M024D	3000	2.4	6.4	220
	308	0.8	BSM110-80M040B	2000	4	9.1	220
BSDA035A	400	0.6	BSM110-60M019D	3000	2	6	220
	401	0.6	BSM60-60M019D	3000	1.91	4.9	220
BSDA040A	402	0.73	BSM80-73M035B	2000	3.5	10.5	220
	403	0.75	BSM80-75M024D	3000	2.39	7.1	220
	404	0.73	BSM90-73M035B	2000	3.5	10.5	220
	405	0.75	BSM90-75M024D	3000	2.4	7.1	220
	406	0.8	BSM110-80M040B	2000	4	10	220
	407	1.2	BSM110-120M060B	2000	6	10	220
	408	1	BSM130-100M100E	1000	10	16	220
	409	1	BSM80-100M040C	2500	4	7.2	220
	410	1	BSM90-100M040C	2500	4	8	220
	411	1	BSM130-100M040C	2500	4	8	220
	415	1	BSM80-100M032D	3000	3.2	9.6	220

Drive model	Motor code	Power (kW)	Motor model	Speed (RPM)	Torque (N.m)	Maximum Torque	Voltage (V)
BSDA050A	500	0.8	BSM110-80M040B	2000	4	12	220
	501	1.2	BSM110-120M060B	2000	6	12	220
	502	1	BSM110-100M100E	1000	10	20	220
	503	1	BSM80-100M040C	2500	4	11	220
	504	1	BSM90-100M040C	2500	4	12	220
	505	1	BSM130-100M040C	2500	4	12	220
	506	1.2	BSM110-120M040D	3000	4	9.6	220
	507	1.5	BSM110-150M050D	3000	5	10	220
	508	1.8	BSM110-180M060D	3000	6	12	220
	509	1.3	BSM130-130M050C	2500	5	12	220
	510	1.5	BSM130-150M060C	2500	6	12	220
	511	1.5	BSM130-150M100A	1500	10	20	220
	513	0.95	BSM130-95M060A	1500	6N	18	220
	514	1	BSM80-100M032D	3000	3.2N	12	220
BSDA060A	600	1.2	BSM110-120M060B	2000	6	12	220
	601	1.2	BSM110-120M040D	3000	4	12	220
	602	1.5	BSM110-150M050D	3000	5	15	220
	603	1.8	BSM110-180M060D	3000	6	18	220
	604	1.3	BSM130-130M050C	2500	5	15	220
	605	1.5	BSM130-150M060C	2500	6	18	220
	606	1.5	BSM130-150M100A	1500	10	25	220
	607	2	BSM130-200M077C	2500	7.7	18	220
	608	2.3	BSM130-230M150A	1500	15	28	220
	609	2.6	BSM130-260M100C	2500	10N	25	220
	610	2	BSM130-200M100B	2000	10N	25	220

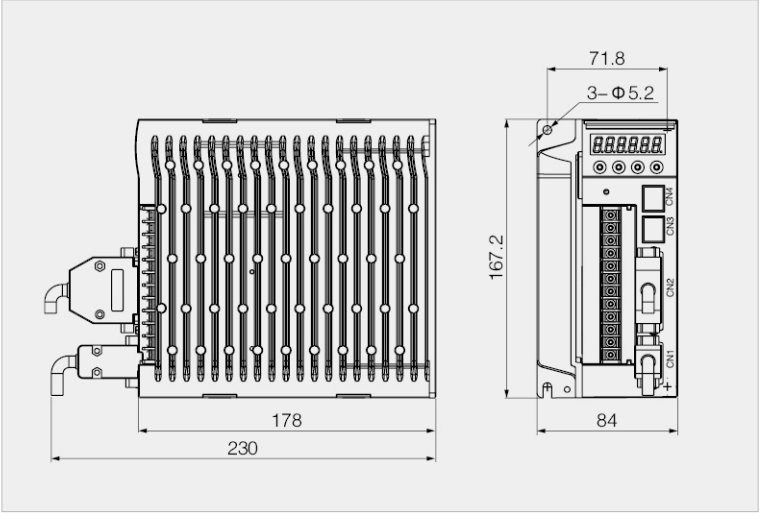
Appendix I Matching Table of Motor and Drive

Drive model	Motor code	Power (kW)	Motor model	Speed (RPM)	Torque (N.m)	Maximum Torque	Voltage (V)
BSDA100A	700	2	BSM130-200M077C	2500	7.7	22	220
	701	2.3	BSM130-230M150A	1500	15	30	220
	702	2.6	BSM130-260M100C	2500	10	25	220
	703	3.8	BSM130-380M150C	2500	15	26	220
	704	3	BSM150-300M150B	2000	15	26	220
	705	2.7	BSM180-270M172A	1500	17.2	43	220
	706	2.9	BSM180-290M270E	1000	27	67	220
	707	3	BSM180-300M190A	1500	19	47	220
BSDA170A	800	3.8	BSM130-380M150C	2500	15	30	220
	801	3	BSM150-300M150B	2000	15	30	220
	802	3.6	BSM150-360M180B	2000	18	36	220
	803	3.8	BSM150-380M150C	2500	15	30	220
	804	3.7	BSM180-370M350E	1000	35	70	220
	805	4.7	BSM150-470M230B	2000	23	43	220
	806	5.5	BSM150-550M270B	2000	27	40	220
	807	4.3	BSM180-430M270A	1500	27	67	220
	808	4.5	BSM180-450M210B	2000	21.5	53	220
	809	5.5	BSM180-550M350A	1500	35	58	220
BSDA060C	412	1.8	BSM110-180M060D	3000	6	18	380
	505	2.3	BSM130-230M150A	1500	15	30	380
BSDA100C	501	2.7	BSM180-270M172A	1500	17.2	43	380
	504	3.5	BSM180-350M170B	2000	17	34	380
	610	3	BSM180-300M190A	1500	19	38	380
BSDA120C	601	4.5	BSM180-450M215B	2000	21.5	53	380
	603	3.8	BSM130-380M150C	2500	15	30	380
	606	5.5	BSM180-550M270B	2000	27	40	380
	609	5.5	BSM180-550M350A	1500	35	70	380

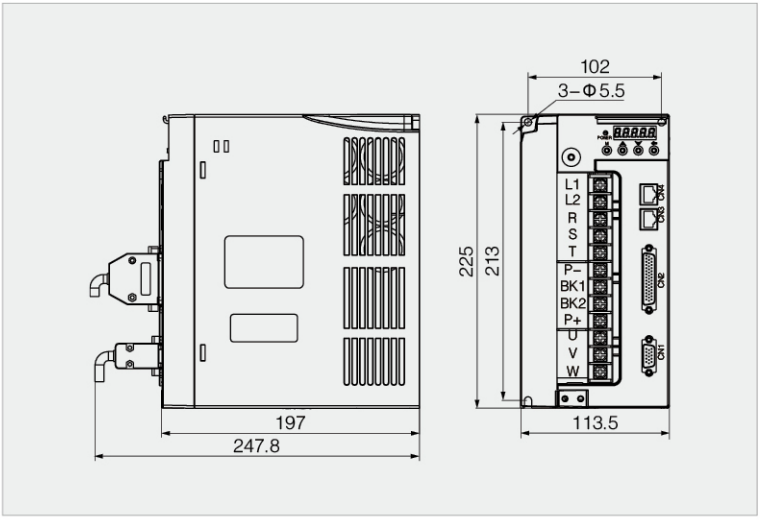
1.Outline and Installation Dimensions of 600W and Below



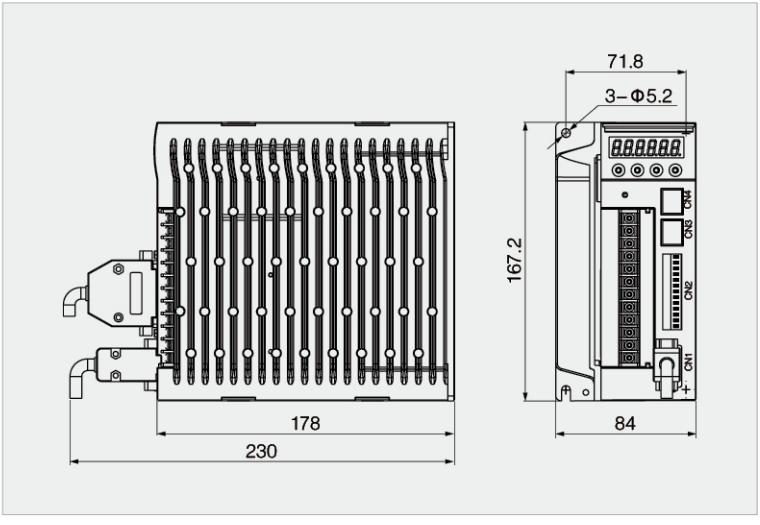
2.Outline and Installation Dimensions of 0.75kW-2.6kW



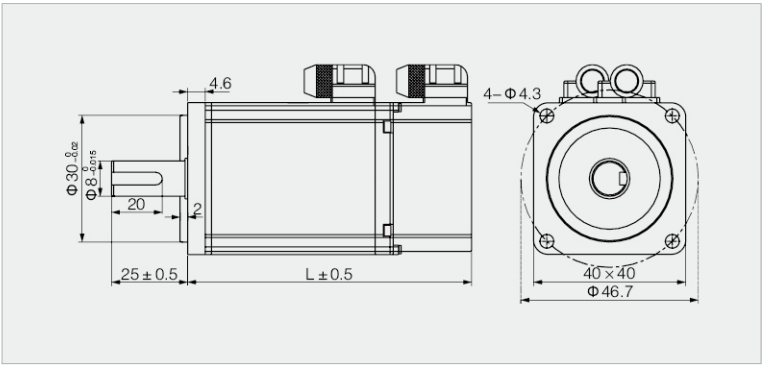
3.Outline and Installation Dimensions of 3.0kW-5.5kW and Dual Servo



4.Outline and Installation Dimensions of 0.75-2.6kW Single Servo-3 Type

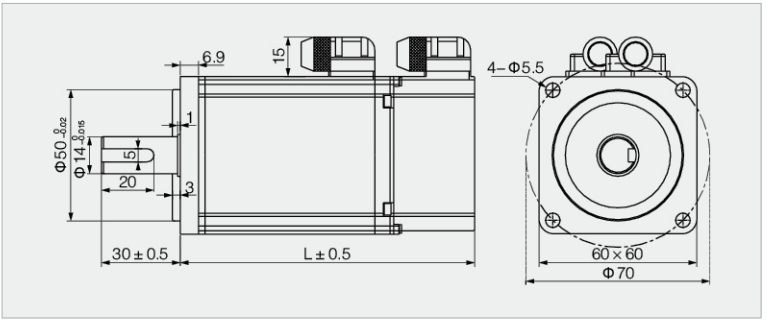


1.BSM40 Series



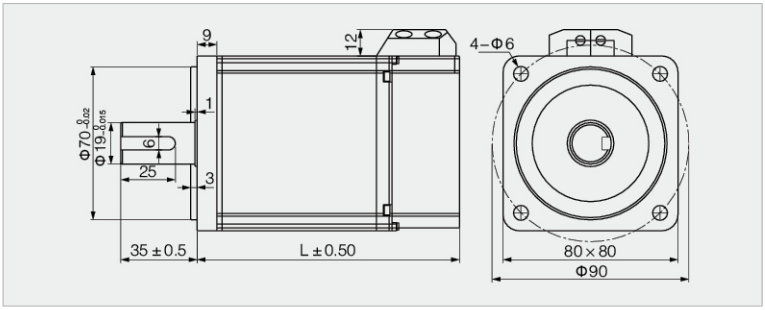
AC220V Motor Model	L without holding brake	L with holding brake	Torque (N.m)	Speed
BSM40-5M013D2	(RPM)	127	1.3	3000
BSM40-10M033D2	85	149	3.3	3000

2.BSM60 Series



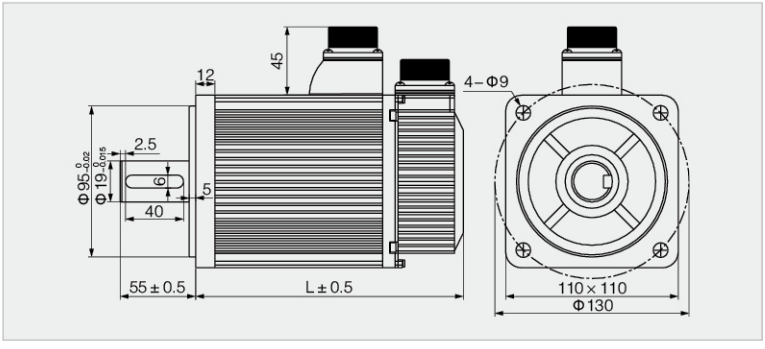
AC220V Motor Model	L without holding brake	L with holding brake	Torque (N.m)	Speed
BSM60-20M006D2	116	164	0.637	3000
BSM60-40M013D2	141	189	1.3	3000
BSM60-60M019D2	169	217	1.91	3000

3.BSM80 Series



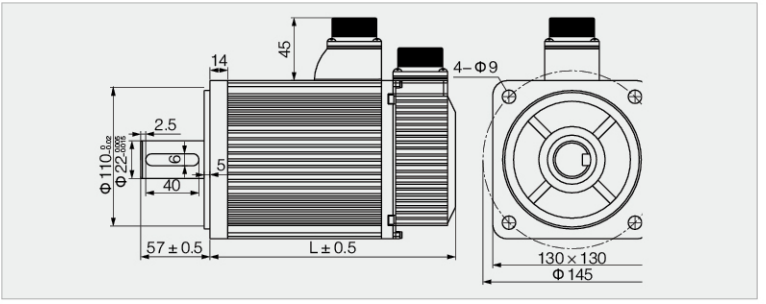
AC220V Motor Model	L without holding brake	L with holding brake	Torque (N.m)	Speed (rpm)
BSM80-75M024D2	151	191	2.39	3000
BSM80-100M032D2	179	219	3.2	3000
BSM80-73M035B2	179	219	3.5	2000
BSM80-100M040C2	191	231	4	2500

4.BSM110 Series



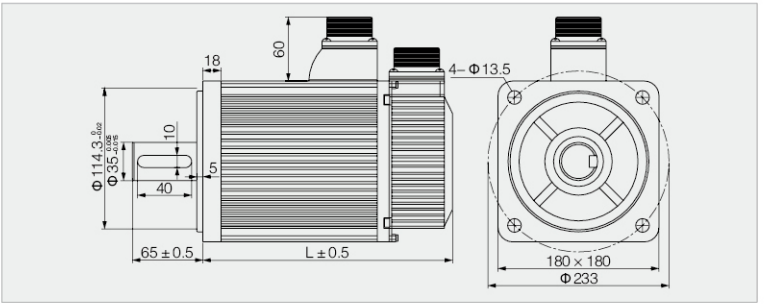
AC220V Motor Model	L without holding brake	L with holding brake	Torque (N.m)	Speed (rpm)
BSM110-120M040D2	189	263	4	3000
BSM110-150M050D2	204	276	5	3000
BSM110-180M060D2	219	293	6	3000
BSM110-120M060B2	219	293	6	2000

5.BSM130 Series



AC220V Motor Model	L without holding brake	L with holding brake	Torque (N.m)	Speed
(RPM)	166	223	4	2500
BSM130-150M060C2	179	236	6	2500
BSM130-200M077C2/C4	192	249	7.7	2500
BSM130-230M150A2/C4	241	322	15	1500
BSM130-260M100C2	209	290	10	2500
BSM130-380M150C2/C4	231	312	15	2500

6.BSM180 Series



AC220V Motor Model	L without holding brake	L with holding brake	Torque (N.m)	Speed
BSM180-270M172A2/A4	226	298	17	1500
BSM180-300M190A2/A4	232	304	19	1500
BSM180-450M215B2/A4	243	315	21.5	2000
BSM180-430M270A2/A4	262	334	27	1500
BSM180-550M270B2/A4	262	334	27	2000
BSM180-370M350E2/E4	292	364	35	1000
BSM180-550M350A2/A4	292	364	35	1500

Product Warranty Instructions

Thank you for choosing BASECON products! This warranty card is an important certificate indicating that you are entitled to warranty (including three guarantees, the same below) for the products under this warranty card. Please cooperate with the seller to fill in, keep it properly, and show it when applying for warranty service. The warranty is guaranteed according to BASECON standard.

1.Guaranteed Scope

This document is only applicable to BASECON brand products purchased by users for their own use. In case of performance failure of the product under normal use conditions within the warranty period, we will provide warranty services according to this document.

2.Warranty Period

The warranty period starts from the first purchase date of the product, and the invoice date shall prevail. If there is no valid invoice, the warranty period shall be calculated from the factory date of the product. If the invoice date is later than the actual delivery date of the product, the warranty period shall begin from the actual delivery date. However, in any case, the starting date of the product warranty period shall not be later than the forty-five (45th) day after the date of delivery of the product. After repair or replacement, the products or parts shall continue to enjoy warranty within the remaining warranty period. If the remaining warranty period is less than three (3) months, it shall be calculated as three (3) months.

3.Replacement and Return

Unless otherwise specified, the product seller shall be responsible for product replacement or return. Only the unchanged products can be replaced or returned. If they are replaced or returned within 15 days after the purchase date, the attached articles and packaging of the products shall be returned together. Before replacement or return, you should: ① remove all materials not covered by warranty; ② Ensure that products or components are not subject to any legal obligations or restrictions that prevent their replacement or return.

4.Scope of Warranty

This warranty does not apply to the following situations: ① misuse, accident, modification, improper physical or operating environment, natural disaster, power surge and failure or damage caused by improper maintenance or storage; ② damage caused by unauthorized service providers; ③ Failure or damage caused by third party products, services or behaviors; ④ Failure or damage caused by using non designated software; ⑤ Decolorization, wear and consumption during product use. If the original identification label of the product or part is changed or removed, or if you cannot provide a valid invoice or warranty card, this warranty commitment will become invalid.

5.Limitation of Liability

If BASECON breaches the contract or needs to bear other responsibilities, you can ask BASECON to compensate for the losses. However, BASECON's liability for compensation is limited to your actual direct loss, and we will not bear any responsibility for the following items: ① the amount exceeding the actual payment for your purchased products; ② any costs and expenses related to obtaining alternative goods, technologies, services or rights; ③ losses caused by interruption or delay in use. This limitation of liability also applies to product sellers and service providers. This is the maximum compensation limit jointly borne by BASECON, product sellers and service providers. The above limitation of liability applies only to the extent permitted by law.

Warm reminder: please keep this warranty card and the valid invoice issued by the seller when selling. Unless otherwise provided by law, if the above documents cannot be presented when applying for warranty, the service provider may refuse to provide warranty services according to law. After purchasing the product, please keep the complete product packaging for at least 15 days from the date of purchase.

BASECON

Products Certificate

Inspector:_____

This product has passed the inspection and is allowed to be delivered.

GUARANTEE CARD

Monday to Friday (except holidays), 9:00 −18:00

BASECON's official website and service hotline provide you with 24−hour uninterrupted services such as product information, FAQs, complaint handling, etc

To ensure your warranty benefits, please fill in the following personal information, where is required:

Name* (please fill in block letters) ☐ Male ☐ Male

Mobile* Email* Other contact information*

User Address*

Product Name*

Dealer information (the following information shall be filled in by the dealer)

Purchase date* (invoice date)

Invoice number*

Dealer name*

Place of purchase*

Dealer contact number*

GUARANTEE CARD (COPY)

Name* (please fill in block letters) ☐ Male ☐ Male

Mobile* Email* Other contact information*

User Address*

Product Name*

Purchase date (invoice date) Place of purchase

Invoice number Dealer contact number

Dealer name Product name